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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, AND CERTAIN INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1984

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

FIRST SESSION

ON

H.R. 3133

AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, AND FOR SUNDRY INDEPENDENT AGENCIES, BOARDS, COMMISSIONS, CORPORATIONS, AND OFFICES FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1984, AND FOR OTHER PURPOSES

PART 3 (Pages 1763-2378)

NONDEPARTMENTAL WITNESSES

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DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT-INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1984

MONDAY, MAY 23, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room SD-124, Dirksen Senate Office Building, Hon. Jake Garn (chairman) presiding.

Present: Senator Garn.

NONDEPARTMENTAL WITNESSES

Senator GARN. The subcommittee will come to order.

This morning we begin hearing the first of 2 days of public witnesses. Since February 17, we have been taking testimony from the 18 agencies under the jurisdiction of the subcommittee. As a result of those hearings, we have built a record as to the administration policy and budget request on literally hundreds of programs.

Between now and tomorrow evening, we will hear from about 60 individuals and organizations who are taking their time to share their thoughts on how these programs might be improved and, hopefully, how we can increase the program benefits while containing the program costs. Most of the witnesses are in an excellent position to advise us in these matters since they are on the receiving end of the programs and can separate what is intended from what is actually being accomplished.

In the past, I have found the testimony presented at the public witness hearings to be of great value in the subcommittee's deliberations.

Because of the sheer volume that we have to cover, I will have to ask each witness to confine their presentation to a maximum of 5 minutes. This will give us time to ask questions and will assure that all of the witnesses will have an equal opportunity to be heard. Of course, all of our witnesses' statements will be placed in the record.

Before beginning, I would like to thank Cathy O'Connor of the subcommittee staff for her very professional courtesy and untiring efforts in coordinating these very, very comprehensive and complicated hearings, to put that many witnesses together in just a period of 2 days.

I am very pleased to have my colleague and friend, Senator Stafford, chairman of the Environment and Public Works Committee, as our first witness today.

As always, it is a pleasure to have your view, Senator Stafford, on EPA's budget request. I will certainly keep your recommendation of $1.351 billion for EPA's operating expense fund in mind. The only thing that I might add is that I hope that the Congress permits Mr. Ruckelshaus to develop his own set of priorities for fiscal year 1984 and that we not preempt him in this regard.

We postponed our committee hearing on EPA because Mr. Ruckelshaus had not yet been confirmed. We felt that the original administration request would probably not be valid and that he would want to have his input on that budget. We did go ahead with rather a cursory hearing with EPA and accepted all of their testimony, but with the recognition that he would want to possibly make changes. I think that is evident by his first few days in office and his change of personnel down there.

I understand he is reviewing the budget at this time and would expect that he would have recommendations of his own to put his mark on the budget.

So I will not be firming up our subcommittee recommendations until we have had the input from Mr. Ruckelshaus.

Before we hear from you, Senator, I understand that Senators Randolph, Durenberger, and Chafee could not be here today. However, they have submitted statements for the record, and without objection, I would like to have their entire statements printed in the record.

[The statements follow:]

STATEMENT OF SENATOR RANDOLPH

Mr. Chairman, I appreciate this opportunity to share my thoughts on the Environmental Protection Agency budget proposal with the members of the HUD and Independent Agencies Subcommittee. I will confine my remarks to three areas I hope this subcommittee will consider closely. These areas include State grants, the Solid Waste Disposal Act, and research and development.

As you know, it has been EPA's policy to phase out environmental program grants to States in the spirit of new federalism. Funding to States will have declined 36 percent since 1981 if the current administration budget proposal is adopted.

Mr. Ruckelshaus has indicated that he wants to reevaluate this policy and explore alternative delegation methods. I believe it is imperative to provide a level of funding that will enable States to continue their programs at the current level while other funding options are being reviewed.

In testimony presented to our Toxic Substances and Environmental Oversight Subcommittee, a number of consequences of State grant reductions were outlined. Representatives of State programs testified that if the 26-percent proposed reduction were enacted, the following results would possibly occur: Ambient monitoring and inspection would be cut back; permitting delays would occur; and some programs would be returned to EPA for administration. Particularly vulnerable would be the national pollutant discharge elimination system and prevention of significant deterioration programs.

None of these results would serve the new federalism objective of this administration. Adequate Federal funding is clearly essential to the success of State-administered programs.

I hope that the subcommittee will seriously consider the Environment and Public Works Committee recommendation of maintaining State grants, at least at the current level.

The second issue I will discuss is the solid waste program. The committee authorized the appropriation of $97 million to support this program in fiscal year 1984. This level of funding is roughly comparable to fiscal year 1981 spending levels.

While this amount should be adequate for program activities in the coming year, it is important to note that the demands on the program are increasing and in future years additional funds may be needed to accommodate this growth. States are increasingly looking to EPA for development of alternative hazardous waste disposal techniques. Facilities permitting activity is increasing as well. Additional regulatory development will place additional burdens on the Agency also. If the momentum gained by the solid waste program is to continue, the funding for it must be maintained as well. An important part of the program should be the upgrading and enforcement of sanitary landfill criteria under subtitle D. Since these facilities will continue to receive sizable quantities of hazardous wastes, they should have adequate regulatory attention. This will require additional funding for subtitle D.

A third concern of mine has to do with the EPA research and development program. If the current proposal is adopted, the program will have declined 32 percent since fiscal year 1981. This is an alarming reduction in light of the need for a sound and credible research program. The research program serves as the basis for standard setting. Without a scientifically strong program, defensible standards cannot be set. The current budget proposal includes substantial funding reductions for control technology projects. Until industry has an incentive to assume responsibility for this work, it is unlikely that the private sector will automatically perform the research work that EPA requires.

The Environment and Public Works Committee has reported a research and development bill that calls for restoring funding to approximately the fiscal year 1981 level. This level of support will enable the Agency to maintain current programs and continue an adequately funded health effects and environmental engineering program.

I have written to the chairman, particularly urging support for $10 million for commercial demonstration of the limestone injection multistage burner. This highly promising technology may hold the solution to controlling a major source of air pollution. I strongly recommend that subcommittee members keep this project in mind as they consider the EPA research and development program.

Thank you again for giving me the opportunity to comment on EPA budget proposals. As we are all aware, the Agency has been under a cloud for some time now. Under the leadership of Mr. Ruckelshaus, hopefully the Agency can proceed to carry out the responsibilities we have given it. Equally important is maintaining a reasonable level of funding to make this possible.

STATEMENT OF SENATOR DURENBERGER

Thank you for the opportunity to present the recommendations of the Subcommittee on Toxic Substances and Environmental Oversight on the appropriate funding levels for some programs of the Environmental Protection Agency.

I will restrict my statement to three specific areas: First, research and development; second, the Toxic Substances Control Act; and third, the Noise Control Act. I will start in reverse order.

The Noise Control Act was enacted in 1972. Five years later, a Federal court of appeals construed the law as preempting the authority of State and local governments to regulate noise emissions. In 1981, funding for the Noise Control Act was reduced and in 1983 it was eliminated. As a result, we now have no program to regulate noise in the United States. There is no regulation by State and local governments because they are preempted; there is none by the Federal Government because there is no money for it.

The Committee on Environment and Public Works has and will continue to attempt a repeal of either the Noise Control Act or the Federal court decision. Until our attempts are met with success, however, funding for the Federal regulatory program should be reinstituted. If resources are insufficient for this, our two committees should examine ways in which the law or the decision can be repealed concurrent with consideration of the appropriations bills.

The Toxic Substances Control Act provides the Environmental Protection Agency with several important mechanisms to prevent and reduce risks to public health and the environment presented by chemical substances. Several of these programs involve the review and analysis of notices that chemical manufacturers and users must submit to EPA. Examples include premanufacture notices under section 5 and notices related to possible adverse effects of chemicals required by sections 8(d) and 8(e). Also, EPA is required by law to respond promptly to recommendations regarding priority testing of chemicals submitted by the Interagency Testing Committee.

The Agency does not control the rate at which these notices and recommendations are generated, but it must fulfill its review and risk assessment responsibilities just the same. In all these programs, the submission rate for notices and recommendations is increasing.

The present level of resources does not appear adequate to deal with the increasing workload. While I do not know exactly what level of support is necessary, I hope that you will examine this program and increase funding for it if that is appropriate.

In addition, I recommend that funding be reinstituted for State programs under section 28 of the law.

The environmental research and development program has sustained the greatest reductions of any program at EPA since 1981. Without an adequate research program and the resulting data to support regulatory and standard-setting activities, the Agency will be unable in the future to set credible environmental standards. The committee is strongly committed to funding a strong, high-quality research and development program at EPA. Therefore, substantial additional resources are recommended for the environmental research and development program.

Of specific concern is the continuation of a vigorous extramural, long-term research program. Funding of research grants to meet specific research needs and continuation of support for the centers of excellence which focus on designated issues are important. There are no resources requested in the President's budget for continuing a health effects research program on nonionizing radiation or for continuing EPA's commitment to support the Health Effects Institute. I support continued funding of these activities.

Health effects research has declined over the past several years. It is important that EPA conduct epidemiological studies to tie health risk assessments to effects on humans at actual environmental exposure levels. Emphasis should be placed on hazardous air pollutant effects studies in view of the need to regulate additional hazardous pollutants.

EPA's research program for developing and demonstrating pollution control technologies has been highly successful in the past in creating innovative, effective solutions to environmental problems. Through major reductions in the environmental engineering and technology research efforts, the administration is seeking to move the responsibility for developing control technologies to industry. Unfortunately, the private sector is unwilling to assume responsibility for development of undemonstrated and high-risk control technology. I believe the Congress should maintain viable control technology development efforts and, therefore, funding for such efforts should be a high priority. Adequate funding for continuation of the research and development of the limestone injection/multistage burner process and other promising control technologies should be provided.

I also urge additional emphasis on research efforts related to Superfund implementation, the development of monitoring techniques for hazardous waste sites, as well as control and containment strategies.

The Committee on Environment and Public Works recommended a $300 million environmental research and development authorization, without specifying recommendations for individual programs. EPA's research and development program will be the subject of hearings over the next several weeks to provide the committee with a basis for recommendations on individual program funding levels, along with a multiyear authorization for the program.

STATEMENT OF SENATOR CHAFEE

Mr. Chairman:

I am pleased to appear before you to discuss the Fiscal Year 1984 appropriations for the Environmental Protection Agency. I want to begin by thanking both you and the ranking member, Mr. Huddleston, for your cooperation in making certain that the authorizing and appropriating committees are speaking as much as possible with one voice.

The Environment and Public Works Committee held hearings on the President's request for EPA -- receiving testimony from both the outside witnesses and then Administrator, Mrs. Burford. It is safe to say our overall conclusion is that the request for the three key components of your account for this Agency -- salaries and expenses, research and development, and abatement control and compliance -- is inadequate.

Reductions in EPA's budget for the last two fiscal years have cut the agency to the point that further cuts may jeopardize its' ability to accomplish its mission. With this in mind our Committee included in its recommendation to the Budget Committee a 5% increase for salaries and expenses over the fiscal year 1983 levels approved by Congress. We have done this recognizing that without some increase we are jeopardizing the agency's ability to keep the best people possible in key policy positions.

Similarly we recommend to the Budget Committee an increase of nearly $50 million in research and development over what the Administration requested. This increase is a very large one but there is no question that with enactment of the Administration's request, research and development would have been reduced to the point making it less than the key planning tool it has been in the past. For instance, in the area of clean water and clean air research -- in the past the agency has provided important assistance to the Congress in establishing regulatory programs for the control of toxic and hazardous waste. With this request from the Administration, it is unlikely that the agency would be able to maintain the type of ongoing research that we need to develop the type of programs necessary to protect our constituents from exposure to environmental hazards.

In the area of abatement, control, and compliance the Committee held hearings on the impact of the Administration's grant request on state and local programs. The conclusion of that hearing, that we shared with the Budget Committee and I want to share with this Committee, is that the proposed budget would have a devastating effect on state and local programs. Many states use the Federal grants to make up almost half of their programs. If the recommended 26% reduction were enacted state programs would not merely slow down -- they would be eliminated. Examples of programs which would be eliminated would be state air and water quality monitoring stations, which provide basic data to both Federal and state officials. I recommend at a minimum that abatement control and compliance budget should be as our committee recommended $391,162,000.

In the area of superfund and hazardous waste we have unfortunately seen the agency move slower than Congress would have liked it. However, many of the new directives coming from the EPA seem to bode for better times. Because of the optimism the Committee feels about Superfund we have requested $100,000,000 in excess of what the President recommend to us. In addition a special problem has arisen with the Superfund.

Superfund is a response program. The Federal government has the lead for cleaning up hazardous substance spills and uncontrolled waste sites. This requires a lot of on-scene work and close coordination with State and local governments. The natural result is that there must be a substantial amount of travel. The Superfund travel ceiling for fiscal year 1983 is $2.7 million, an increase of only 50% over fiscal year 1982. Yet there will be remedial work going on at over twice as many sites, much of it involving complicated and time-consuming oversight. An effective emergency response program also requires a substantial investment in travel. The dioxin problem in Missouri is an example of the necessary, but unexpected demand that can be placed on the program. The travel associated with this response alone will cost between $60,000 and $80,000 this year. At the current rate of expenditure it is possible that the Superfund travel ceiling will be exhausted by June.

Lastly, Mr. Chairman and members of the Committee I would like to talk to you about waste water treatment grants. As I said last year during this same hearing, we provided in the 1981 amendments to the Clean Water Act a more effective system for constructing waste waste treatment facilities. We also included a special program dealing with the problem of combined sewer overflows into marine bays and estuaries. I come here before you today somewhat shocked to report that EPA has yet to issue the final regulations to implement those 1981 amendments. I am particularly concerned about the impression that some members may have that the states are unable to spend or are unable to allocate any of the $30 million dollars that Congress provided last year for the CSO program. If the truth be known Mr. Chairman, the failure of EPA to finalize its regulations has prevented a single application from coming into the agency. I expect that if these regulations aren't issued promptly we will be holding oversight in our Committee as to why they have not been.

As you know from the Need Survey that we called for in the 1983 Appropriations Act this program is important for many communities. I would urge the Subcommittee to provide a full appropriation for this program so that needed work can get underway in many communities. I have been advised that you are contemplating considering placing some additional restrictions on this program. Before you do that Mr. Chairman I would appreciate it if the Committee would discuss any new restrictions that it may place on the allocations of these funds, to make certain that nothing inadvertently would be enacted that would somehow alter what we, the authorizing Committee, intended in 1981.

Mr. Chairman, I look forward to working with you again this year to make certain that EPA is given the added resources to implement the statutes as vigorously as possible. I would also hope that your Committee would be responsive to a request from the new Administrator to obtain additional resources for the Agency as it appears likely he may.

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM VERMONT

Senator GARN. Please proceed, and we are happy to have you.

Senator STAFFORD. Thank you very much, Mr. Chairman.

I appreciate the opportunity to be here. What I am about to say is not intended in any way to preempt what the new Administrator of the Environmental Protection Agency may tell you in the way of his wishes for the budget, but it is to insure that he have, from our viewpoint, adequate funds with which to proceed. He doesn't have to spend them all if he doesn't want to. My testimony will address two areas of major concern: Overall funding for the Agency's operating budget and funds for the Superfund program.

In addition, I would like to request your assistance in resolving two budget-related problems within the Superfund and the research and development programs.

As you know, the Agency has undergone a major upheaval in the last few months, to put it mildly. The Administrator and several Assistant Administrators have resigned, in part because of the public perception that they failed to implement and enforce the Nation's environmental laws.

However, there is also a widespread and, I believe, justifiable belief that the resources for the agency proposed in the President's 1984 budget are simply not adequate.

A new Administrator is in office, as you pointed out, Mr. Chairman. Based on our committee's exhaustive examination of his record, we believe Bill Ruckelshaus will discharge his duties faithfully and well. We also believe it is incumbent on the Congress to provide the Agency and its new head with the resources needed to carry out its statutory mandates.

The Committee on Environment and Public Works recommended in March that the Budget Committee fund EPA operating programs at $1.14 billion in fiscal year 1984 and the Superfund program at $310 million. Since making that recommendation, however, the committee has conducted additional oversight hearings and an extensive review of the Agency's operations in preparation for Mr. Ruckelshaus' confirmation hearing.

These reviews have convinced me that the higher funding is essential. I have concluded that the Environmental Protection Agency operating budget should be funded at no less than $1.35 billion in fiscal year 1984 and that the funding for the Superfund program should be increased to $383 million.

The budget resolution which has been adopted by the Senate povides that level of funding for those EPA programs.

As you may know, Mr. Chairman, I had planned to cosponsor an amendment to the Senate-reported budget resolution with the sole purpose of increasing funding for EPA. Several other members of the Committee on Environment and Public Works, as well as my distinguished colleague from Vermont, Senator Leahy, were to have joined me in that. However, we did not find it necessary to offer a specific amendment because the substitute budget adopted by the Senate provided the increased funding for EPA. I am supplying for the record a number of colloquys from the debate on S. Con. Res. 27, the First Concurrent Resolution for Fiscal Year 1984, which clarify the specific assumptions in the budget resolution regarding these programs.

Mr. Chairman, am I limited to 5 minutes here? If I am, I will stop.

Senator GARN. We do have an exception to my general rule, and you are not.

Senator STAFFORD. Let me say that I would be glad to cooperate.

Senator GARN. We had that already preplanned in the schedule.

Senator STAFFORD. I don't think I will take a great deal over 5 minutes.

These figures that I mentioned represent a substantial increase over the current fiscal year 1983 levels, and I hope that you and your committee will also consider providing the Agency with selected supplementals to allow a progressive increase in operations beginning in the current fiscal year, especially if the new Administrator asks for them. Of course, personnel levels would also have to be increased concurrent with greater funding to insure responsible administration.

While I will refrain from suggesting funding levels for specific offices, I will note that over the past 3 years, funding cuts in overall operations have been substantial.

The $1.351 figure is the level of funding that EPA received for its operating budget in fiscal year 1981.

In fiscal year 1982, the EPA budget was cut 20 percent from fiscal year 1981. In fiscal year 1983, funds were cut an additional 5 percent below fiscal year 1982. By bringing operating funds to the nominal fiscal year 1981 level, the reduction in real resources will decline by 22 percent in that time period, taking inflation into account.

I am most concerned about the impact of budget cuts on enforcement, research and development, and State grants.

Reductions imposed since 1981 have reduced the Government's ability to enforce environmental laws and carry out the research necessary to detect and reverse environmental degradation.

Since 1981, enforcement resources other than those for the Superfund program have declined 36 percent in real terms. The number of civil cases referred to the Department of Justice by EPA fell 76 percent over that period. Between September 1980 and March 1983, the number of EPA attorneys working on enforcement dropped from 288 to 232, a 20-percent reduction.

Research and development resources were reduced 58 percent in real terms between 1981 and 1983. The Congressional Budget Office, in a report on the fiscal year 1984 EPA budget proposals, warns that research and development cuts may hinder future standards development and slow the accumulation of information on health effects of environmental pollutants.

One specific area where Federal research and development support has been sharply reduced is the development and demonstration of pollution control technology. Unfortunately, this is not an area in which substantial private-sector investment can be relied upon.

One example of this is the development of the limestone injection/multistage burner LIMB process, which is said to be well advanced in Europe, but has yet to be demonstrated in the United States. While we do not know what level of funding is adequate to support demonstration of LIMB technology in the United States, it is clearly in the public interest for us to provide resources for that purpose.

During the last Congress, the Environment and Public Works Committee approved an acid rain control program which would mandate an 8 million ton reduction in sulfur dioxide emissions over a 10- to 12-year period in the 31 Eastern States. While this proposal has not yet been approved by either the full Senate or House, the development of LIMB technology could very well reduce the expense of a reduction of a sulfur and sulfur dioxide emissions program.

State grants were reduced 33 percent in real terms between 1981 and 1983. State officials and organizations testified before our committee this year that reductions proposed by the administration for fiscal year 1984 could reduce the ability of States to determine the amount and sources of pollution because of cutbacks in ambient monitoring and source inspections. Reductions would also impair the assessment of compliance with regulations and would delay permit reviews, thus increasing industry cost.

Testimony received during our committee's recent oversight hearings on the Superfund program convinced me that the Agency can accelerate its hazardous waste cleanup program.

During his confirmation hearing, Mr. Ruckelshaus specifically stated that he believed increased expenditure of Superfund moneys was desirable.

By fiscal year 1984, a total of $768 million in tax receipts will be available in the Superfund for Agency use. Clearly, the resources to accelerate cleanup are available. An artificially imposed ceiling should not constrain our progress in this area.

An additional Superfund issue identified during our recent oversight hearings was the impact of cuts in agency travel on the rapid cleanup of toxic dumps. Apparently Superfund managers have been unable to respond expeditiously to emergency and ongoing investigations because travel funds were unavailable.

Clearly, the ability to respond to emergencies is one of the most important elements of a hazardous waste program. I request, Mr. Chairman, that you consider providing funds specifically for that activity in fiscal year 1984 and exempt that element of EPA's program from any across-the-board provision that might be imposed on travel activities.

Now let me conclude with two technical issues I would like to address. For the past several years, we have worked with you, Mr. Chairman, and your committee to make Superfund moneys available to the Department of Health and Human Services to carry out health-related activities authorized under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

The Department of Health and Human Services is to operate its own Superfund program separate from and independent of that operated by the Environmental Protection Agency. While it is true that many, perhaps most, responses both agencies will be involved and, therefore, will work cooperatively, each of the agencies also has its own set of individual responsibilities. Those of the Department of Health and Human Services include the specific tasks listed under section 104(i).

Those are not tasks in which the Environmental Protection Agency possesses any special expertise. Quite the contrary, the expertise lies in the Department of Health and Human Services which is, therefore, responsible for implementation. Its appropriation requests for the implementation of these tasks should be submitted and reviewed as a separate item, not as part of the EPA package.

Language was included in both the 1982 urgent Supplemental Appropriations Act and the 1983 Department of Housing and Urban Development-Independent Agencies Appropriation Act to provide money to HHS upon enactment of the laws. However, in March of this year, HHS had still not received these moneys. My colleague, Senator Randolph, and I thus found it necessary to ask the General Accounting Office to determine whether those funds were being impounded by the administration. By the time the Administrator responded in April, HHS had received the funds. I have, nonetheless, directed staff of the Environment and Public Works Committee to work with your committee staff to develop language to insure that this situation is not repeated.

I expect the Environment and Public Works Committee to explore the possibility this year of authorizing funds for some EPA research and development activities on a multiyear funding basis.

I believe that this course of action is necessary in order to insure that long-term research will continue to be performed under the auspices of the EPA, and I intend to support legislation establishing in fiscal year 1984 a multiyear, long-term research program. I would hope, Mr. Chairman, that you and your committee could support this concept in appropriations, as well.

Mr. Chairman, I wish to thank you very much for giving me this opportunity on behalf of the Environment and Public Works Committee to appear in front of you in connection with the EPA budget.

Senator GARN. Thank you, Mr. Chairman. We appreciate you taking the time to be here, and I would just comment on your remarks about travel. We have included a $2 million request in the supplemental for 1983 for that specific purpose.

Senator STAFFORD. I thank you for that.

Senator GARN. Thank you very much. I appreciate your coming.

Senator STAFFORD. Thank you, sir.

STATEMENT OF HON. CARL LEVIN, U.S. SENATOR FROM MICHIGAN

Senator GARN. Just in the nick of time.

We are happy to welcome our distinguished junior Senator from Michigan to testify before the subcommittee, and we appreciate your promptness. You are right on the minute.

Senator LEVIN. Thank you, Senator Garn.

Mr. Chairman, I knew that you usually keep a pretty tight schedule, so I decided to be on time for a change.

Thank you very much, and thank you for the opportunity to testify. I am here to urge you and other members of the subcommittee to support an increase of $12 million in the budget of the Environmental Protection Agency for a very badly needed and much overdue comprehensive analysis of the nationwide dixoin problem. Of that amount, $2 to $3 million would be allocated for a prototype study in Michigan.

Mr. Chairman, dioxin contamination is one of the most perplexing manifestations of man's growing genious for creating more and better ways of poisoning himself. For years, the dioxin isomer 2378–TCDD has been recognized by the scientific community as the most toxic substance known to man. We know that it causes severe abnormalities in some animals and the almost instantaneous death of some creatures, in even miniscule amounts. The Food and Drug Administration has warned against eating fish found to have over 50 parts per trillion concentration of this dioxin.

Yet, the specific impact upon humans is unclear. We know, on one hand, that exposure can cause liver dysfunction, deterioration of peripheral nerves, and that acute doses can cause chloracne, a severe skin rash. But the precise relationship between these effects and various levels of dioxin is not clear and consistent.

What we do know is that there is the potential for severe and extensive damage to humans and that that potential for severe damage must be regarded as real. For that reason, we must move with far greater urgency than has been demonstrated to get more information about the presence of dioxin in our waterways and in the fish that they contain. We must move quickly to analyze all data for a clearer understanding of dioxin's impact on humans.

My State of Michigan, Mr. Chairman, feels a particular urgency in this matter. Studies done in the Midland area by the Dow Chemical Co., formerly a major producer of the herbicide 2,4,5,T, which contains dioxin—as early as 1977 were very startling. They showed concentrations up to 230 parts per trillion in fish caught in rivers in Michigan. Bear in mind that the Food and Drug Administration has limited consumption of fish with 25 to 50 parts per trillion, and no consumption when the concentration is above 50 parts per trillion.

In 1978, the EPA studied the problem in Midland and found contamination levels as high as 695 parts per trillion, although the average level was 53 parts per trillion, and the following year, an EPA study found that overall levels had dropped.

Partly because of the inconsistency of the findings up to that point, the EPA and the Michigan Department of Natural Resources undertook more substantial testing in the Midland area in late 1981. But it is not until this spring, a year and a half later, that any analysis of that test data, and only a small portion of the analysis at that, was completed and released to the Congress and the public. Moreover, it is uncertain when a complete analysis will be done, even of that limited test data.

Mr. Chairman, it is my belief that the EPA has been dawdling—that part of the inordinate delay in getting to the bottom of the dioxin dilemma has been administrative mismanagement. FPA, for its part, says that the problem is a lack of money for a comprehensive study and analysis. Whatever the case, EPA says it is now prepared to move forward in a proper way with a substantial national study program if they get the funding.

As I mentioned earlier, the EPA and the Michigan Department of Natural Resources have developed a prototype study that should provide guidance for the remaining portion of the overall project.

Mr. Chairman, it is time that we call a halt to limited studies, incomplete analyses, and uncorrelated conclusions. It is imperative that we give the entity with the responsibility for getting to the bottom of the dioxin dilemma the resources to do the job right. We must determine, while we still hopefully have the time, whether dioxin is a time bomb building to a terrible explosion or something less malevolent. I hope the latter is the case, but we cannot afford not to know.

I therefore urge, Mr. Chairman, the increase of $12 million in the EPA budget for the study and the analysis which I have described.

I thank you.

Senator GARN. Thank you, Senator.

In my response to the Senator from Vermont, I made the comment that EPA's budget is in a state of flux because of all the changes. We did hold hearings on EPA, but they were rather cursory. We didn't spend a great deal of time, frankly, because we expect Mr. Ruckelshaus, after he has had an opportunity to review the budget, to have his own imprint on that budget. I checked EPA's current fiscal year 1984 request, and it is correct, they have practically nothing for dioxin research, development, and abatement.

I have asked EPA to review this to identify the amount of money they think they could usefully employ. Because of your interest and the national importance on this, I believe it's a valid request of them to take a look at it and make a recommendation back to the subcommittee before we make a decision on what funding levels should be in.

Senator LEVIN. I thank you very much for that comment and that support.

I am very must disturbed, as are all of my constituents in Michigan, when we heard reports on the radio about Michigan fish not being safe to eat because of the dioxin level in our streams and our basin. Those national radio and television, newspaper reports are very damaging to the economy in Michigan, an economy that can't afford any more blows.

So the kind of help that the chairman has just described which, hopefully, will be forthcoming would, indeed, be very, very helpful to my

State's economy, and it is very urgently needed, and I appreciate your support.

Senator GARN. As soon as I get the information back from them on what type of program they are proposing and what funding level, I would be happy to let you know.

Senator LEVIN. Thank you so very much.

Senator GARN. Thank you.

Next we would like to invite to the witness table Mr. Brendan Whittaker, secretary, Vermont Agency of Environmental Conservation, on behalf of the National Governor's Association; Kenneth Hagg, director of the division of air quality control, the Massachusetts Department of Environmental Quality Engineering; Richard Valentinetti, president of the Association of State and Territorial Solid Waste Management Officials; and Thomas Eichler, director of Delaware's Environmental Control, on behalf of the Association of State and Interstate Water Pollution Administrators.

STATEMENTS OF:

BRENDAN WHITTAKER, SECRETARY, VERMONT AGENCY OF ENVIRONMENTAL CONSERVATION, ON BEHALF OF THE NATIONAL GOVERNOR'S ASSOCIATION

KENNETH HAGG, DIRECTOR, DIVISION OF AIR QUALITY CONTROL, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING, ON BEHALF OF STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS

RICHARD VALENTINETTI, PRESIDENT, ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS

THOMAS EICHLER, DIRECTOR OF DELAWARE'S ENVIRONMENTAL CONTROL, ON BEHALF OF THE ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION ADMINISTRATORS

Senator GARN. Gentlemen, your titles are so long, I can almost use up all your time going through your titles, but we are happy to have you with us.

Mr. Whittaker?

Mr. WHITTAKER. Thank you, Senator, for the privilege of being here, and I will also say it is a pleasure to be joined by my colleague with whom for a time I have worked, Thomas Eichler from Delaware. I have testimony which is on file with the committee, and I would like to use my 5 minutes to go through seven points very quickly.

I come because for the better part of last year, I chaired an ad hoc committee to the National Governor's Association (NGA), which was attempting to deal with Mrs. Burford, then head of EPA, on the so-called State grants.

Mrs. Burford made it very clear that the strategy then was to zero line the State grants at some uncertain date in the future in almost every State, and I was chairing this group. All 50 of us said we simply could not stand this, it would put us out of business. I think this business of State grants is a misnomer anyway. I would like to see them termed a partnership payment, and these aren't gratuitous grants. Where we do the work in partnership with the Federal Government, we think being on the scene we do it better.

As the Senator from Michigan says, sometimes we have our own very local concerns that we know what the scene is, but we cannot suffer the types of things Mrs. Burford was talking about, and I understand this whole climate is changing on this business of zero funding. The States are short of money because of the recession and have their own budget problems.

At the same time, we understand, with your administration, the need to balance the Federal budget and to reduce the deficit wherever possible.

We don't deny individuality, either. We think the States can do a good job in environmental management, but what is threatened is that all-important Federal floor or fence or umbrella, where we, in the Federal society in which we live, our form of government, need both. We had a threat for a while that the Federal portion would simply disappear, leaving the States on their own.

We asked Mrs. Burford at the time—and I know part of this is history, but I think it is important to note that what the quid pro quo would be, since the threat still remains in anyway, that the Federal funds would be not only eliminated, but even severely reduced, States might well say they simply cannot carry on the program. I do want to stress in talking with my colleagues, this is a very real threat when you talk to the leadership of State legislature and Governors throughout the country.

The quid pro quo that she had was that the Federal Government would take back the programs. We think this, again, is a totally unworkable concept. We had strong inputs from EPA, strong urging that we raise our permit fees in order to cover increased costs. Vermont took this seriously; many of the States did. We looked at it and found that particularly in a small rural State such as ours, our water pollution control permits, for example, would cost thousands of dollars, $10,000, $30,000, $40,000, $50,000 for our relatively small industries and municipalities.

It was simply ludicrous to think this would balance the books on environmental matters.

Another point to make, too—and I know this is a State political problem in a small piece sense—very likely increases or fund raising on permits or other sources environmentally would not go to the environmental agencies. It would go into the general fund to balance that account in the State legislatures.

I don't think there is any need to rehearse to you the great areas of concern I share with my fellow secretaries around the Nation, whether we are from small rural States like Vermont or like industrial States with dioxin, with groundwater and hazardous toxics of all kinds. The secretaries hear this daily concerning the public and concerning the industries from where they stand, concerning the Superfund, as our senior Senator just mentioned, and these are expensive to meet, the new realities, the new environmental realities of the 1980's and 1990's as we go into the next century. So I do make a strong plea.

I am pleased to see the sense of direction on the changing grants.

Point No. 7: I will finish with something slightly off the grants but clearly tied in, and that is the research needs. There is no way, for example, a State such as Vermont—and I would assume the larger States would ever replicate national work on, for example, long-range transport and acid rain. We cannot do it alone. We can't do the work on pesticide labeling.

Our Secretary of Agriculture and myself must depend on the Federal Government research in consert with the companies to be sure, but again, that fence, floor or umbrella as we look for the answer here.

Finally, the matter that Senator Stafford mentioned, pollution control technology, again, this can't be done solely at the State level. We are simply too small. We need the national level.

Senator GARN. Thank you, sir.

[The statement follows:]

STATEMENT OF BRENDAN WHITTAKER, SECRETARY, VERMONT AGENCY OF ENVIRONMENTAL CONSERVATION, ON BEHALF OF THE NATIONAL GOVERNORS' ASSOCIATION

Mr. Chairman, members of the Committee, thank you for the opportunity to appear before you this morning. My name is Brendan Whittaker and I am the Secretary of the Vermont Agency of Environmental Conservation. I am pleased to be here today on behalf of the National Governors' Association, at the request of Governor Jay Rockefeller, chairman of the NGA Energy and Environment Committee. Through the NGA Energy and Environment Committee the Directors of state pollution control agencies regularly meet to discuss important environmental issues and to make recommendations to the Governors. One of our main concerns is the level of federal support for the management of environmental programs. I am also here with the State and Territorial Air Pollution Program Administrators (STAPPA), the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA), and the Association of State and Territorial Solid Waste Management Officials (ASTWMO). Representatives of these groups will follow my remarks to give you an assessment of what the proposed EPA budget means for their specific programs. What I want to make clear at the outset though, is that the Governors and these pollution control professionals are united in their strong recommendation that funding for certain key EPA activities not be reduced below FY 1982 levels.

Several recent public opinion polls have indicated that Americans continue to be committed to the goals of environmental protection including the protection of public health, the nation's natural resources and quality of life. They not only endorse maintaining our existing systems of protection but feel that the government should be more aggressive in matters of public health and environmental protection, especially in regulating citizen exposure to the dangers of toxic and hazardous materials. The public would be shocked to find that we have few or no standards for toxics in our air, surface water and drinking water.

In spite of public attitudes, the Administration has proposed an overall 28% reduction in federal support for the management of the air quality, water-quality, drinking water, and hazardous waste programs. Although the states have indicated a willingness to assume greater responsibilities for environmental program management, these reductions are proposed at a time of virtually unprecedented budget stringency in most states. Most state budgets now reflect both last year's federal budget cuts and the continuing recession.

Most states are experiencing revenue shortfalls from earlier projections, and virtually every state legislature meeting this year has had to raise taxes and/or make significant cutbacks in government programs and services. Attempts by the states to increase their own support for environmental programs to make up for the reductions in federal funds will pit these programs against the states' other urgent needs, such as welfare.

In addition, state legislators oftentimes tend to respond to a decreasing federal commitment to finance particular programs by lowering their own contributions. For example, the Colorado legislature has been considering several bills which would reduce state funds because the federal government has indicated it no longer considers environmental protection an important issue. This situation greatly increases the difficulty states will face if federal support for managing environmental programs is reduced.

State/Federal Partnership

In considering the proposed reductions in federal support for environmental management programs, it is important to bear in mind the nature of the partnership that has evolved over the past decade between the states and the EPA. Under the terms of the partnership, the federal government has mandated certain activities and provided support to the states for the development and implementation of plans for carrying out these activities. The Governors believe that the Administration's budget proposal for EPA you have before you represents a unilateral action to change the terms of the federal/state partnership. Not only do the existing mandates remain, but new ones are in fact being created especially in the implementation of the hazardous waste program.

Cost-effective programs which at the same time save money for industry and meet environmental goals cost government more money to implement. Examples of such programs include the bubble concept, emission trading and flexible water quality standards tailored to meet site-specific problems. Both EPA and industry are promoting these approaches, but not the adequate financial resources to implement them. And despite the EPA's claim that regulatory reform efforts will save the states money, EPA has not actually demonstrated how a single dollar can be pared from the cost of managing our environmental programs without sacrificing environmental quality and consistency of approach.

Without federal support, states will begin to cut corners in environmental protection in order to reduce expenses. They will be forced to reduce their efforts in things like permitting, monitoring, enforcement, etc. Carried far enough, the states could well adopt widely varying approaches to pollution control. While that is not necessarily bad, it should be remembered that federal support was justified in the first instance by the need for establishment of a national program of public health and environmental protection administered through state programs. In addition, consistency is important both to the business community, which operated in an interstate environment, and to the states themselves, which may be subject to the spectre of industrial flight and economic competition if consistency breaks down.

Then too, without adequate federal support, there is a danger that many states will not accept or will return delegation of a number of key environmental programs. Indeed, a June 1982 survey by the National Governors' Association and the association of pollution control professionals--a copy of which is attached to my statement--suggests that a significant number of states are giving serious consideration to returning or not accepting delegation of certain programs if the federal support for environmental program management is reduced.

The NGA survey revealed a number of facts germane to the debate about how, and how much, federal support for state environmental management activities could be reduced without reducing the ability of states to adequately implement federal environmental programs. Among the salient findings are the following facts:

- Federal support plays an important role in environmental program management. While the figures vary widely from state to state, in aggregate terms federal funds provide about 45% of state air program budgets, about 46% of state water quality program budgets, about 69% of state hazardous waste program budgets, and about 48% of state water supply program budgets.

- Only a small number of states expected to be able to make up for the Administration's FY 83 proposed 20% reduction in federal support by increasing state funds, in the face of their own severe financial constraints.

- Most state environmental agencies will not be able to rely on permit fees to provide funds for environmental programs, at least in the short run. Many states do not have existing statutory authority to collect permit or processing fees. About 21 states and territories currently charge for air quality permits, but in only 10 are the funds available to the permitting agency. In only 9 states and territories are water quality permit fees available to the permitting agency; only 7 hazardous waste agencies collect and keep permit fees, and only 2 water supply agencies actually keep permit fees. In other states that charge permit fees, revenues are deposited in the state general fund.

- A significant number of states expected a delay in the time necessary to process and issue permits under federal environmental statutes as a result of the reduction in federal support for environmental program management. In other states, many of which are subject to mandatory time limits for issuing permits, the quality of permit review is expected to decline.

- In addition, a large number of states have indicated that they may reduce certain environmental management activities proportionately to the reduction in federal support or more. This reflects the states' belief that they have already streamlined state programs and that significant further savings cannot be expected from management changes alone. Many states indicated that budget reductions will require actual reductions in personnel and equipment.

Governors Budget Recommendations

The Governors are deeply concerned about the projected size of future budget deficits and adopted a position at their February, 1983 mid-winter meeting which calls for a reduction in the federal deficit through reductions in the increases for defense expenditures, increases in tax revenues, and modest increases in federal domestic expenditures. The Governors recommended limiting the 1984-1988 non-defense discretionary spending to three-fourths the rate of inflation.

At the same time however, the Governors singled out the need for federal financing for state environmental programs and reaffirmed the position that federal funds for state environmental program management should not be reduced below 1982 levels.

In response to the previously mentioned NGA survey, most states suggested the need to increase their efforts in a number of key environmental protection activities, if resources are available. The survey also indicted that in the face of reduced federal support it will be impossible for states to develop more vigorous programs in these areas without retrenchment elsewhere. Those areas most frequently mentioned by the states as needing increased effort if federal funds for environmental programs were increased include: toxic pollution control across all environmental media, groundwater protection and management, and control and management of hazardous wastes in both new and abandoned disposal sites.

Conclusion

Although most of my remarks have been in regard to state management grants, please understand that our concerns extend to other areas of the EPA budget as well. In particular, we hope that funding for technical assistance to states and research and development activities will not be reduced. We have strong doubts that adequate research and development will be undertaken by the private sector. The increasing complexity of our environmental problems and economies of scale also urge for a strong federal research and development program on pollution control.

In summary, I want to reiterate that the Governors and the state pollution control officials remain committed to strengthening and improving the federal-state partnership in environmental protection. We believe that requires that each environmental program be funded at least at its FY 1982 levels. And we think the general public concurs with us.

We very much appreciate your interest and support of these programs, Mr. Chairman, and hope to work with you to ensure that they are adequately funded.

STATEMENT OF KENNETH HAGG

Senator GARN. Mr. Hagg?

Mr. HAGG. Good morning and thank you for the opportunity to be here.

My name is Kenneth Hagg, and I am director of the division of air quality control for the Massachusetts Department of Environmental Quality Engineering.

I am here today representing the State and Territorial Air Pollution Program Administrators (STAPPA), and it is a long name.

Senator GARN. Not only is it a long name, I fouled up on yours. I guess I was used to Alexander with an "I" in Hagg. So we will start over, and I will say, Mr. Hagg, if you would like to begin?

Mr. HAGG. Thank you, Mr. Chairman.

EPA has requested for air pollution control programs in the States a total of $69.9 million under section 105 of the Clean Air Act for fiscal year 1984.

That represents a decrease in Federal funds available to State air programs of 17 percent over what is currently available in fiscal year 1983 and 20 percent over what was available in 1982.

In order to justify that kind of a decrease, EPA asserts, in part, that our planning activities for State implementation plans are largely biased now, and, therefore, we don't need resources to do planning anymore.

It is certainly true that we have been involved in planning recently very heavily, but the planning activities are far from through, particularly when one considers that we still, in many cases, must develop implementation plans to achieve the national standard for lead.

We still must deal with modified implementation plans to address a changed ambient air quality standard for total suspended particulate, which we expect to come out of EPA in the near future, and considering the number of disapprovals that have been proposed for State-proposed ozone and CO plans, the planning process there for automotive related pollutants is hardly over.

Clearly, the planning process has not ended. But one of the plans have been developed, and they are fairly substantial at this point.

Those plans must be implemented, and to implement them we need additional or sufficient resources. For example, solely in the area of ozone control, we, in Massachusetts, have adopted a very lengthy list of control requirements for sources that emit volatile organic compounds. These industries wanted at the time—and EPA in contrast at the time of adopting relations—to approve regulations like a bubbling provision, which is a very cost-saving provision for industry but also very resource intensive.

We included those provisions in our regulations but now have to face the prospect of actually implementing that regulation. While that regulation will allow industry to save millions of dollars in compliance costs, we are now at least 9 months behind schedule in adopting compliance schedules. We simply don't have the resources to carry out the plans that we have already made, and those are parts of the requirements of the existing Clean Air Act.

Two areas that were recognized in the provisions that were reported out of the Senate Public Works Committee last year were also highlighted by our members as areas that need additional efforts in the future.

Those two areas are: First, toxics control. We, today, are faced on a day-to-day basis with concerns from citizens around various plants in our States about the potential of being exposed to levels of toxic air pollutants which might injure their health.

Years ago, those same complaints came to us as concern about odor. The concern about odor is still there, but there is a new dimension to those concerns. It is important for us to have the right resources in order to satisfy these citizens about their concerns. Whether a problem of a toxic air pollutants exists or not, it is important for us to say, "Yes, there is a problem," or, "No, there isn't," and we simply cannot do that with existing resources.

Further, another area identified by both the Senate Public Works Committee and our own membership is a need for additional studies in the area of acid deposition. STAPPA members recognize that these are areas of emerging problems to us, but we need additional resources to properly respond to them.

Finally, a STAPPA survey that was recently completed shows the impact of the $3 million cut that recently took place this past fiscal year in Federal funding.

In the area of monitoring alone, the survey shows that 40 percent of the States had decreased air monitoring activities, and what are the practical consequences of decreased air monitoring?

First, it is going to mean a delay in the permitting process for major new facilities, because with adequate monitoring, in many cases, the 1-year required monitoring for PSD could be satisfied by existing State-run monitoring networks.

With the rather sparce network of monitors that now exists, that requirement simply will not be able to be fulfilled by State networks.

And even more important, we have put on the books in the recent past some significant and very costly regulations. We do not have the means to track how those regulations will affect air quality. We have less monitors today than we did in the past.

It would be unfair to conclude that every State will cut all programs significantly. Program activities will be reduced in each individual State that reflect that State's own priorities.

It is fair to say, however, that nationally there will be significant reductions in program activities. EPA can carry out the requirements of the Clean Air Act, but we don't think that that is the way it is done most effectively, most efficiently, and it is certainly not the most desirable way.

What is desirable is as Mr. Whittaker said, a State-Federal partnership with the States taking the lead responsibility.

We are prepared to do that if we have the sufficient resources in order to carry out our responsibilities.

I thank you for the opportunity to testify.

Senator GARN. Thank you.

[The statement and letter follow:]

STATEMENT OF KENNETH HAGG, DIRECTOR, DIVISION OF AIR QUALITY CONTROL, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING, ON BEHALF OF THE STATE AND TERRITORIAL AIR POLLUTION PROGRAM ADMINISTRATORS

Mr. Chairman and Members of the Committee, my name is Kenneth Hagg and I am the Director of the Division of Air Quality Control, Massachusetts Department of Environmental Quality Engineering. I am here today representing the State and Territorial Air Pollution Program Administrators (STAPPA), the national association of state air pollution control agencies. We appreciate this opportunity to present our views on the Environmental Protection Agency's Fiscal Year 1984 budget request for federal air pollution control grants to state and local agencies under Section 105 of the Clean Air Act.

The Environmental Protection Agency has requested that air pollution control grants under Section 105 be funded at $69.9 million for Fiscal Year 1984, a 17 percent decrease in available funding from Fiscal Year 1983, and a 20 percent decrease in available funding from Fiscal Year 1982. This substantial decrease in requested federal funds for state and local air programs largely rests on EPA's rationale that states have less to do now than in the past, and they can therefore absorb cuts in federal funding without adversely affecting air pollution control programs. For example, in its budget justification, EPA asserts that required implementation plan revisions — such as for automotive-related pollutants — should be largely completed by Fiscal Year 1984, thereby producing a decrease in state planning activity. The facts, however, simply do not bear out this conclusion. Many states must still develop long neglected control plans to achieve the health-based ambient air quality standard for lead. Furthermore, we will need to modify control plans for particulate matter once EPA revises the air quality standard for that pollutant. This new standard is expected to be proposed this summer. And considering the number of proposed disapprovals for state plan revisions for carbon monoxide and ozone, it is hard to accept EPA's premise that the planning process for these pollutants is over. Finally, EPA has cited 144 counties for violating ambient air quality standards after the mandatory attainment date. Clearly, if these counties are indeed in violation of an air quality standard, some planning activity must take place in order to develop a suitable plan that will describe how the standard will be attained.

After the plans are developed and approved, they still must be implemented. These efforts will further increase states' workloads, requiring a significant increase in resources. For example, control requirements for an ever-expanding list of industrial categories for volatile organic compounds will require more, not less resources. Moreover, implementation of toxic air pollution control programs will require increased funds as well.

Thus far, I have only addressed certain requirements of the existing Clear Air Act. The Act is scheduled to be reauthorized this year, and the revised act is likely to result in increased responsibilities for state and local agencies. For example, the Congressional Budget Office recently analyzed the clean air bill reported from the Senate Environment and Public Works Committee last year (and reintroduced this year) and found that states would need an additional $16 million in the first year alone to implement the provisions of the bill if it were enacted. It is simply not reasonable to assume that the future holds less responsibilities for state air pollution control agencies.

The preceding statement becomes even more compelling when one considers the program areas in which states would use additional resources if they were available. Last month, STAPPA released the results of a survey it conducted that was designed to assess the impacts of varying levels of federal funding to state air pollution control agencies. A copy of the results of this survey is attached to my statement. Among other things, we asked states to identify program areas where they would assign increased emphasis if they had additional federal funding. The states' almost unanimous first choice was to increase activities in the area of control of toxic air emissions. States also indicated that they would assign resources to perform additional studies in the area of acidic deposition. These two activities — the control of toxic air pollutants and acidic deposition — represent a major future challenge for state air pollution control agencies. These areas were also identified in the bill reported last year by the Senate Environment and Public Works Committee as needing further attention. While there may be debate over what form that attention should take, there certainly is agreement that something further needs to be done. STAPPA members recognize this, but need additional resources to respond adequately to these problems.

The STAPPA survey also sheds light on the impact of the $3 million reduction (from Fiscal Year 1982 levels) that state air pollution control agencies received in federal grants in Fiscal Year 1983. The survey shows, for example, that 40 percent of the states decreased their air monitoring this year. EPA's data indicate that nationally, there are

162 fewer air monitors operating today as compared to a year ago. While the size of the total planned state monitoring network has decreased by 439 monitors, there are still 118 fewer monitors in place than are called for in federally-approved plans.

The survey's conclusions about air monitoring are simply repeated to a large extent in virtually every program area. Reduced levels of effort are a necessary consequence of level and, most recently, decreased federal funding. For example, states are currently experiencing, among other things, significant decreases in enforcement activity, delays in issuing permits to industrial plants, and personnel cuts. Regarding this latter point, three years ago, the Ohio state air agency had a total of 107 direct program staff. Today, the staff level is 92, a 15 percent decrease. Assuming that federal funds are maintained at existing levels, (i.e., Fiscal Year 1983 levels), Ohio's air agency still projects that it will have to reduce its staff by five additional slots. Unfortunately, this scenario is typical of what is happening in many states across the nation.

I would like to conclude my testimony by outlining the effects of EPA's proposed funding level of $69.9 million for 105 grants during Fiscal Year 1984. The following information is again taken from our survey. The survey indicates that:

* Virtually all states will further decrease ambient air quality monitoring, resulting in (1) fewer monitoring sites, (2) significant delays in the processing of data from remaining sites, and (3) major losses in quality assurance of available data;

* There will be a major decline in the level of source inspections and related enforcement activities. Many states will return to EPA the programs that the agency had delegated to them for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPS).

* Most states will attempt to maintain a new source permitting program; however, significant permitting delays will result and some states will return the PSD program to EPA.

* Generally, the proposed level of federal funding will result in a reduction in air program staff in the range of two to ten persons per state; one state has projected a loss of 70 positions.

The STAPPA survey presents further results of a 20 percent budget reduction.

It would be unfair to conclude that every state will cut all programs significantly. Program activities that will be reduced in each individual state reflect that state's own priorities. It is fair to say, however, that nationally, there will be significant reductions in program activities. Further, EPA will need to prepare itself to assume major new responsibilities in implementing the day-to-day air programs for states — a situation which we believe is inconsistent with congressional intent as expressed in the Clean Air Act, and which is, in fact, inconsistent even with EPA's own expressed desire to increase delegations to states. State air programs are capable of carrying out the necessary mandates of the Clean Air Act if adequate funding is made available to them.

Thank you for this opportunity to testify. I will be happy to answer any of your questions.

The Environmental Protection Agency's
Proposed FY 1984 Budget Request for
Grants to State and Local Air Pollution Control Agencies

An Assessment of Effects

A
Survey Prepared
by the

State and Territorial Air Pollution Program Administrators
(STAPPA)

April 1983

Introduction

The State and Territorial Air Pollution Program Administrators (STAPPA) — the national association of state air pollution control officials — is keenly interested in ensuring that state and local agencies have adequate resources to implement their clean air responsibilities. For this reason, STAPPA conducted a survey of state air pollution control agencies to ascertain what effects various proposed levels of federal funding to these agencies in FY 1984 would have on their programs. One portion of the survey questioned states about the impact of a 20 percent reduction in federal air grants; such a decrease in funds closely parallels the Administration's FY 1984 request of a 17 percent reduction in air grants, particularly when the effects of inflation are considered.

The federal Clean Air Act, enacted in 1970 and amended in 1977, requires the states to develop and implement air pollution control programs under federal guidance and supervision. The states' efforts have been supported by state funds and by a matching grant from the Environmental Protection Agency which is authorized under section 105 of the Clean Air Act. Since 1970, the commitment of non-federal funds has steadily increased, while the amount of federal funds has expanded at a much slower rate. In FY 1983, federal grants to state and local air agencies were reduced by $3 million, 4 percent below the FY 1982 level. Table I summarizes the respective federal and state contributions for funding state air programs over the past decade.

The non-federal financial commitment has produced an amount of funding which, when adjusted for inflation, is almost level with its share in FY 1972. The federal commitment, however, when adjusted for inflation, is significantly less than that of 1972. Obviously, the result has been unsatisfactory — air pollution control agencies are attempting to implement programs in 1983 at a funding level equal to 1972 in spite of the additional requirements not only imposed by the 1977 Clean Air Act, but also delegated to state and local agencies by EPA. The states have had to make adjustments in order to accomplish their most critical program needs. The threat to the programs that are currently being implemented is of great concern. State agencies, which have already been adversely affected by inflation, are now facing the possibility of further federal cuts.

1983 Survey of State Air Pollution Control Programs

Prior to consideration of the FY 1983 budget, the National Governors' Association and STAPPA surveyed state air pollution control agencies to determine how varying levels of federal funding would affect state program activities. This survey was published in June 1982.

In early 1983, STAPPA again surveyed its members to determine the actual effects of the 3 percent reduction in federal air grants that state agencies received in FY 1983. In addition, STAPPA posed several other questions to the states:

- given the state's present funding level for air pollution control, how would it prioritize its existing program activities?

Table I

FUNDING FOR STATE AND LOCAL AIR POLLUTION CONTROL PROGRAMS

(Millions $)

FY	Purchasing Power	Non-Federal		Federal		Total		% Non-Federal
		Actual	*Real	Actual	*Real	Actual	*Real	
72	1.00	55.0		42.0		97.0		57
73	.94	63.1	59.3	50.7	47.6	113.8	106.9	55
74	.85	76.7	65.2	51.5	43.7	128.2	108.9	60
75	.78	91.2	70.3	52.5	40.9	143.7	111.2	53
76	.73	94.7	69.1	55.3	40.3	150.0	109.4	63
77	.69	104.8	72.3	55.6	38.3	160.4	110.6	65
78	.64	107.9	69.0	66.0	42.2	173.9	111.2	62
79	.58	116.3	67.4	80.0	46.4	196.3	113.8	59
80	.51	132.1	67.3	82.8	42.2	214.9	109.5	61
81	.46	143.9	66.1	87.7	40.3	231.6	106.4	62
82	**	144.9	60.8	87.7	36.8	232.6	97.6	63
83	**	151.0	57.3	84.7	31.8	234.7	89.1	65

*Purchasing power of the dollar. Using the 1972 dollar as being worth $1.00 and each following year's dollar purchasing power being rated against the 1972 dollar. Source: U.S. Treasury.

**Purchasing power of the dollar for FY 1982 is computed at 1982 rate as no estimates are available.

- how would the state be affected by a 20% reduction in federal funding in FY 1984 for air pollution control programs?
- if funding were made available to expand air quality efforts, what new air programs, initiatives or studies would the state choose to implement?

Thirty-eight states and territories (of a total of 54) responded to the survey. The information collected through the survey is organized by program area.

Executive Summary

STAPPA conducted a survey in 1983 to ascertain what effects various proposed levels of federal funding to state and local air pollution control agencies in FY 1984 would have on their programs. A brief summary of the results of the survey follows (for more specific information on each air program activity, please refer to the accompanying text):

- in FY 1983, many states were forced to decrease their activities in several program areas; for example, 39% of the respondents decreased air quality monitoring activity, and 34% reduced their compliance determinations (please refer to Table II).
- reductions in FY 1984 air grants would likely be absorbed by other existing air program activities, such as enforcement, compliance determinations, etc.
- reductions in FY 1984 air grants would result in an inability of states to initiate new programs and/or maintain newly-developed ones, including toxic emissions control, regulatory reform (bubbles, banking and funding), etc.
- reductions in FY 1984 air grants would result in states either not accepting delegation or returning delegation of certain programs (Prevention of Significant Deterioration, National Emission Standards for Hazardous Air Pollutants, etc.) to EPA.

Table II

ESTIMATED AND ACTUAL ACTIVITY LEVELS FOR FY 1983

Program	% of States that estimated maintaining activity*	% of States that actually maintained activity	% of States that estimated decreasing activity*	% of States that actually decreased activity	% of States that estimated increasing activity*	% of States that actually increased activity
Air Quality Monitoring	62	52	28	39	10	9
Compliance Determination	78	66	16	34	6	0
Enforcement	79	83	18	13	4	3
General Permitting	79	82	11	14	11	4
PSD Permitting	74	72	11	16	16	12
Toxic Emissions	65	69	15	8	20	23
Bubbles	82	76	6	14	12	10
Banking	69	65	0	24	31	12
Inspection and Maintenance of Automobiles	100	67	0	20	0	13

*Based upon an NGA/STAPPA survey published in 1982.

I. TOXIC EMISSIONS CONTROL

A. Actual Effects of FY 1983 Funding Levels

- 69% of respondents maintained their air toxics activities; 8% decreased their activities
- 5% of respondents considered air toxics control a high priority; 11% considered it a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- many states currently without air toxics control programs would postpone developing and implementing them
- most states with programs would experience delays in permitting, ranging from 1-3 months or more
- most states would abandon enforcement activity

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 84% of respondents would increase air toxics control activities

II. DEVELOPMENT OF STATE IMPLEMENTATION PLANS

A. Actual Effects of FY 1983 Funding Levels

- 28% of respondents considered SIP development a high priority; 18% considered it a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- virtually every state would face significant delays in developing and submitting SIPs
- many states would not undertake new SIP activity, such as plans for lead, particulates, and attainment of the secondary standards
- some states may be forced to default on SIP requirements

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 5% of respondents would increase SIP activity; 16% considered it a low priority for allocating increased funds

III. ENFORCEMENT

A. Actual Effects of FY 1983 Funding Levels

- 83% of respondents maintained their enforcement activities; 13% decreased their activities
- 37% of respondents considered enforcement a high priority; 11% considered it a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- most states predicted severe impacts on enforcement activities (as high as 50% reductions) affecting the states' ability to identify and prosecute violators, conduct enforcement hearings, etc.

C. Anticipated Effects of Increased Federal Funding in FY 1984

- many states would increase their level of enforcement activities if additional funds were made available

IV. COMPLIANCE DETERMINATION

A. Actual Effects of FY 1983 Funding Levels

- 66% of respondents maintained their inspection activities; 34% decreased their level of activities
- 24% of respondents considered site inspections a high priority at present funding levels, while 21% described them as a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- states would generally decrease the number of source inspections for major sources by 30% on average, and for minor sources by 60% on average
- frequency and quality of source inspections would suffer
- many states would discontinue their quality assurance programs for stack testing
- delays would result for most compliance activities

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 5% of respondents would increase their source inspection activities

V. AMBIENT AIR QUALITY MONITORING

A. Actual Effects of FY 1983 Funding Levels

- 52% of respondents maintained their ambient air quality monitoring efforts, while 39% decreased their activities (EPA data indicate that in 1982, there was a 3% reduction in national and state monitors being operated and an 8% decrease in the total number of planned monitors)
- 66% of respondents considered ambient monitoring a high priority; 13% considered it a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- states estimated a 5-60% reduction in monitoring activities
- states would be required to discontinue 4-24 monitors in each state program
- virtually every state predicted significant delays in data processing and major losses of quality assurance and control

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 5% of respondents would increase their air monitoring activities

VI. GENERAL PERMITTING/NEW SOURCE REVIEW

A. Actual Effects of FY 1983 Funding Levels

- 82% of respondents maintained their general permitting activities; 14% decreased their activities
- 53% of respondents considered general permitting activities as a high priority; 5% considered it a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- states predicted reductions as high as 40% in permitting activities, including the issuance of permits; many anticipated abbreviated and incomplete reviews

- several states indicated that they would be forced to return certain permitting programs to EPA
- some states anticipated that they would cease certification of minor sources

C. Anticipated Effects of Increased Federal Funding in FY 1984

- many states predicted that permits would be processed more expeditiously

VII. PREVENTION OF SIGNIFICANT DETERIORATION PERMITTING

A. Actual Effects of FY 1983 Funding Levels

- 72% of respondents maintained their PSD permitting activities; 16% actually decreased these activities

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- 12 states predicted that they may return the PSD program to EPA
- almost all states anticipated significant delays in permitting
- some states indicated that they would be forced to abandon their visibility programs

C. Anticipated Effects of Increased Federal Funding in FY 1984

- many states predicted that permits would be processed more expeditiously
- states indicated that they would be better prepared to implement their delegated programs

VIII. HAZARDOUS WASTE PERMITTING

A. Actual Effects of FY 1983 Funding Levels

- most state air agencies either do not currently administer hazardous waste permitting programs or associate little activity with them

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- many states planning to implement hazardous waste permitting programs would postpone their plans indefinitely
- states with on-going programs predicted significant delays in permitting, limited expansion of their programs, etc.

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 13% of respondents indicated that they would increase their activities

IX. AUTOMOBILE EMISSIONS INSPECTION AND MAINTENANCE

A. Actual Effects of FY 1983 Funding Levels

- 67% of respondents maintained their I/M activities; 20% decreased their activities
- 8% of respondents considered I/M a high priority; 8% considered it a low priority

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- states in the process of implementing I/M programs would experience significant delays; the quality of their programs would also suffer

- states in the process of developing I/M programs may abandon their efforts
- states with programs that are totally funded by state appropriations or fees would probably not be affected

C. Anticipated Effects of Increased Federal Funding in FY 1984

- In several states, funding would be used to develop and implement I/M programs

X. COMPLAINT INVESTIGATION/PUBLIC PARTICIPATION

A. Actual Effects of FY 1983 Funding Levels

- 8% of respondents considered complaint response (i.e., nuisance complaints) as high priorities; 18% rated them as low priorities
- most states indicated that these programs were already reduced as far as possible

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- many states predicted that they would be forced to eliminate certain categories of investigations
- some states would abandon all public participation and public awareness programs
- many states would have to eliminate follow-up investigations
- virtually all states predicted delays and a reduction in the quality of their work

C. Anticipated Effects of Increased Federal Funding in FY 1984

- some states would improve their public participation programs

XI. EMISSIONS BANKING AND TRADING

A. Actual Effects of FY 1983 Funding Levels

- no state considered emissions trading a high priority; 24% believed trading was a low priority
- 65% of respondents maintained their banking activities, while 24% decreased them

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- most states with programs anticipated major reductions in program quality and accuracy along with significant delays
- states without programs would abandon any efforts to develop them

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 34% of respondents indicated that they would increase their emissions banking activities

XII. EMISSIONS BUBBLES

A. Actual Effects of FY 1983 Funding Levels

- 3% of respondents considered bubbles a high priority, while 18% considered it a low priority

- 76% of respondents maintained their activities, while 14% actually decreased their activities

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- many states indicated that they would reduce and/or eliminate bubble programs
- those states suggesting that they would retain their emissions bubbling programs predicted significant delays in all data processing activity; other states indicated that they would cease development of any new bubble regulations
- virtually every state currently without a bubble program would make no effort to develop one

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 34% of respondents would increase their activities relating to emission bubbles

XIII. NEW PROGRAMS

A. Actual Effects of FY 1983 Funding Levels

- the effects of current funding levels were not reported by the states

B. Anticipated Effects of a 20% Reduction in FY 1984 Federal Funding

- states almost unanimously agreed that no new project activity would be undertaken
- existing projects that would be eliminated include acid desposition studies, wood burning, waste oil and solvents, etc.
- any existing program activity that would continue would be significantly delayed or deferred

C. Anticipated Effects of Increased Federal Funding in FY 1984

- 68% of the states would increase their efforts in the area of acid deposition studies; 39% would do more to control waste oil and solvent burning; 37% would do additional work in the area of wood burning studies; 13% were interested in expanding the area of indoor air pollution; and 5% would like to increase their public awareness efforts

XIV. Miscellaneous

A. Anticipated Impacts of a 20% Reduction in FY 1984 Federal Funding

1. Personnel

   - states would reduce their staff from 2-10 employees per state on average; one state estimated a 70-person reduction

2. General Equipment

   - most states predicted significant reductions in new equipment purchases, ranging from 10-20% reductions in some states to no purchases in others
   - states would also experience problems in repairing equipment
   - states also predicted cutbacks in computer and data processing equipment

LETTER FROM KENNETH HAGG, DIRECTOR, DIVISION OF AIR QUALITY CONTROL, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING

June 8, 1983

Senator Jake Garn
Chairman
Senate Appropriations Subcommittee
on HUD-Independent Agencies
SD-123 Dirksen Senate Office Bldg.
Washington, D.C. 20510

Dear Senator Garn:

On May 23, 1983, I testified before the Senate Appropriations Subcommittee on HUD-Independent Agencies on the Environmental Protection Agency's FY 1984 budget request for funding of state air programs. At the conclusion of my testimony, you submitted two questions to me and requested that I provide you with answers to them sometime in the near future. At this time, I would like to give you my thoughts on these questions.

As you may recall, you requested further information on the effect that decreases in the state air grants program would have on state air monitoring. Specifically, you posed the following questions:

> 1) Given the restoration by Congress of all but $3 million of the $17.8 million proposed cut in the FY 83 state air grants program (section 105), how do you explain the decrease in state monitoring--does it imply that states have assigned a lower priority to monitoring?
>
> 2) What would be the impact on air monitoring activities in FY 84 if the $14.8 million decrease in section 105 grants is approved?

In addressing the first question, I would like to emphasize the fact that the decline in state monitoring does not imply that states have assigned a low priority to this activity. Quite the contrary. In the STAPPA survey which I submitted with my original testimony on May 23, 66% of respondents considered ambient monitoring a high priority while only 13% considered it a low priority. The decrease in state monitoring activity is not a product of the states' lack of concern with this area; rather, it is a result of two factors: decreasing federal funds and increasing responsibilities for state air pollution control agencies.

In regard to the decrease in federal funds, I would like to point out that though only $3 million of the 105 grants were cut in actual dollars, the decline in federal funding was more drastic if inflation is taken into account. With a 4% inflation rate, the effective decline in federal funding between 1982 and 1982 was 8%. Given this decrease, it is surprising, not that 40% of the states have found it necessary to curtail air monitoring, but that more states have not done so.

In addition, states have found themselves in the difficult position of trying to deal with ever increasing responsibilities with decreasing fiscal support from the federal government. As an illustration of the increasing demands placed on states' budgets, many state air pollution control agencies have increased and will continue to increase their monitoring activities associated with toxic air pollutants and acid precipitation.

The result of these two factors (a smaller budget to deal with more responsibilities) is an overall reduction in state air pollution control activities. States have not singled out air monitoring to bear the brunt of their budget cuts. At the same time that state agencies were reducing air quality monitoring by 40%, they also, for example, decreased compliance determination by 34% and banking by 24%.

The subcommittee's second question dealt with the impact that a $14.8 million decrease in section 105 grants would have on state air monitoring activities. If one took inflation into account, a $14.8 million decline in funds would roughly equal a 20% decline. In the STAPPA survey, state air pollution control agencies were asked to predict what effect a 20% cut would have on their activities. Estimates of reductions in monitoring activities ranged from 5-60% while states also predicted that they would discontinue the operation of from 4-24 monitors. Virtually every state predicted significant delays in data processing and major losses of quality assurance and control. The Utah state air pollution control agency, for example, predicted that a reduction in FY 1984 dollars would necessitate a decline in personnel as well as in costly air monitoring equipment resulting in a decrease in monitoring activities.

Please bear in mind that, as with the actual reduction in state activity during FY 1983, states estimated reductions in other areas besides monitoring if their budgets are subject to a 20% cut in federal funds in FY 1984. As was the case with the other respondents, Utah predicted that the impact of budget cuts in its air programs would not be limited to monitoring. Other possible effects cited by the Utah office include delays in permitting sources, decreases in enforcement activity against non-complying sources as well as little or no studies undertaken to establish pollutant standards.

I hope that these responses satisfactorily answer the questions which you posed. If you would like further clarification on the possible effects of budget cuts on air monitoring or on any other aspect of federal funding of state air programs, please do not hesitate to contact me.

Sincerely,

Kenneth Hagg

Kenneth Hagg, Director
Division of Air Quality Control
Boston, Massachusetts

STATEMENT OF RICHARD VALENTINETTI

Senator Garn. Mr. Valentinetti?

Mr. Valentinetti. Thank you, Senator.

Good morning, Mr. Chairman. My name is Richard Valentinetti. I am the director of the air and solid waste programs in Vermont, and I am the chairman of the Association of State and Territorial Waste Management Officials.

Senator Garn. You have a hard time with it, too?

Mr. Valentinetti. I have a hard time, too, Senator. [Laughter.]

I appreciate the opportunity to testify here on behalf of ASTSWMO, an executive branch organization which consists of the directors of the State hazardous and solid waste programs throughout the country.

The association concurs with the previous testimony that has been made by the National Governors Association that State grants for environmental programs should be funded at least at the fiscal year 1982 levels.

This position is particularly important in the fields of waste management and cleanup. The association has a number of priorities that they would like to see funded, but highest on its list is the restoration of subtitle D funds in RCRA. These are the funds that were geared toward the sanitary landfill programs and the closure of open dumps.

Federal funding was cut several years ago in this program, and it has resulted in the States going alone in dealing with this problem. The result has been that the States have had to take a brush-fire approach to this particular problem as they have had to react to individual problems rather than approaching it from the comprehensive solid waste effort as envisioned by RCRA.

Many of the States in their hazardous waste program have gone to 100 kilograms per month as a level that could not go to a sanitary landfill, and even though the Federal Government is shoring up that particular issue by considering in the reauthorization of RECR lowering the exemption from 1,000 kilograms a month to 100, nevertheless, there is an awful lot of hazardous waste going into those sanitary landfills.

I think that we talk about a lot of time bombs. I think this is one which is going to explode, and what the States are looking for right now is some money in this area so that we can, in fact, have a lot more investigative work before the explosion occurs.

While juggling State moneys dealing with subtitle D funds, the States have welcomed the promise of Federal financial assistance to establish a new and necessary State hazardous wastes program. We entered into a long-term partnership with the Federal Government aimed at the ultimate goal of State-authorized programs.

Thirty-seven States have now achieved phase I authorization, which is mainly geared toward the generators and transporters of hazardous wastes, while another 10 have received authorization for phase II, which is the permitting functions of the hazardous wastes program.

All States were working toward final authorization and ultimate takeover of the program in lieu of the Federal program.

But as we work toward these goals, there are a number of increased resources that are needed, and I would like to just give you a few examples: Based on a 1980 EPA report, operations resource impact analysis by EPA, the States would have to increase from 363 work-years in fiscal year 1982 to 2,375 work-years in fiscal year 1984 for the permitting activity. That is a 6.5-percent increase.

The State of Massachusetts presently employes 75 people to perform hazardous waste tasks. Again, going back to an EPA resource mark, they will need an additional 145 people to properly operate the hazardous wastes programs in lieu of the Federal Government for a total of 220 people.

In EPA's 1980 analysis, manpower demands for insuring compliance with the regulations and/or permit conditions and manifest system activities were predicted to be increased by 25 percent.

Another area of at least some concerns to States is that EPA has made an underestimation of the costs of these various activities to the States. EPA, in a document to 0MB, indicated that they felt that the costs for authorization would be approximately $5,000.

Our surveys have indicated that the actual cost of authorization at this time is running about $50,000 a State. So it is quite an increase over the estimates that were made by EPA.

These aggregate numbers suggest that the workload for the States in fiscal year 1984 is seriously underestimated by the administration. The association concurs with the Congressional Budget Office's April 1983 analysis that the most glaring flaw in the administration's proposed EPA fiscal year 1984 budget is that there is a shortfall between the agencies recommended State grants levels and the real needs of the State waste programs for the implementation of Federal statutory mandated programs.

In addition to the burden on States by subtitle D activities and by the hazardous waste responsibilities, current administration policy has been in the past to deny State reimbursement for State administrative costs incurred under Superfund activities.

The administration has made a significant step forward in the last week in which they have indicated that States will not be required to come up with a 10-percent match for planning activities.

The position of the association has been very strong that the act did not call for matching of planning activities but only the implementation of Superfund.

The States find a recent Office of Technology Assessment report, "Technology and Management Strategies for Hazardous Wastes Controls," recommendations for the integration of RCRA and Superfund State activities for Federal funding purposes of great interest.

It appears that these two programs must be integrated if we are going to get the full force of our resources in this area of dealing with hazardous wastes, both past hazardous wastes activities as well as current activities in this area.

In summary, our commitment is to seek primacy in State programs as provided for in RCRA and, in keeping with the intent of Congress, remains the highest environmental priority in many States.

But faced with severe budgetary problems caused by the present recession and as so clearly described by Mr. Whittaker, the States are facing the prospects of inadequate Federal financial support in the hazardous wastes management area.

Our resolve to seek Federal authorization of State programs has not been seen. Our ability to do so quickly is certain to be affected by the insufficient Federal support.

This is a time for Congress to reaffirm the Federal Government's partnership with the States. If Federal support of our hazardous wastes program continues to be inadequate, States will be forced to reprioritize their activities to maintain the protection of the public health and environment. Some States may, then, be unable to qualify for the program authorization. The association supports a thoughtful, long-range Federal decision to expedite delegation of the waste management programs to the States.

Such delegation depends on adequate Federal funding for the RCRA State grants, from fund activities as well as the State solid waste programs, and, to echo Secretary Whittaker's comments, for the research to develop the needed waste management standards and monitoring needs.

Hazardous waste is a worldly investment. It is the key to turning off the tap of future superfunds and to preventing harm to this Nation's public health as well as the country's environment.

Thank you, very much, Senator.

[The statement follows:]

Statement of Richard Valentinetti, President, Association of State and Territorial Solid Waste Management Officials

Good morning, Mr. Chairman and members of the Subcommittee, I am Richard Valentinetti, Director of the Air and Solid Waste Division of Vermont's Agency of Environmental Conservation and President of the Association of State and Territorial Solid Waste Management Officials. ASTSWMO is a non-profit organization consisting of the directors of State solid and hazardous waste programs and their staff members. I appreciate the opportunity to testify on State appropriation needs for FY84. I am here today to encourage Senate consideration of restoring funding to Subtitle D grants, of concurring with the House's Subcommittee recommendation for $50 million in State grants, and of providing adequate research monies. State Officials support these three recommendations for strengthening this nation's waste management system.

As you know, in 1976, State solid waste management officials joined with Congress to applaud the enactment of the Resource Conservation and Recovery Act. At last, national recognition of a very serious and growing solid and hazardous waste problem would enable State solid waste management agencies to begin a long overdue corrective and preventative program. Federal funding would help many States attack the problems caused by less than adequate systems for the management of our trash and garbage, the residues from air and water pollution control devices, residuals from industrial activity and most importantly, hazardous waste that affects the public health and safety.

Perhaps our first serious disappointment with the Federal program under RCRA involved the government's decision to eliminate funding and implementation of Subtitle D of the Act and to restrict Federal attention and financial assistance to hazardous wastes only. With deletion of Subtitle D funds, the States have been "on their own" for several years in non-hazardous waste and resource recovery programs and have utilized whatever resources are available to solve problems and improve solid waste management resources. While we agreed with the placing of the highest priority on the hazardous waste program, we also recognized the benefits of an integrated and comprehensive waste management program that addresses all sources of solid waste.

While concerned about the lack of funding for Subtitle D activities, the States welcomed the promise of Federal funding assistance to establish new and necessary State hazardous waste programs. We entered a long-term partnership with the Federal Government aimed at the ultimate goal of State authorized hazardous waste programs. Thirty-seven States have now achieved Phase I Authorization and are working toward Phase II. Ten States have received Phase II Authorization and are working toward Full Authorization. As the orderly takeover of the Federal program proceeds, the States must assume more inhouse responsibilities and capabilities.

Gentlemen, the hazardous waste program is in its infancy. It is not a mature program, with standards established, adequate laboratory facilities

AVAILABLE, EXPERIENCED PERSONNEL IN THE FIELD, AND A DEFINED ADMINISTRATIVE PROGRAM. FOR THAT REASON, THE RCRA PROGRAM WILL BECOME, FOR THE NEXT SEVERAL YEARS, INCREASINGLY RESOURCE INTENSIVE. SUPERIMPOSED OVER THE INCREASING COSTS OF THE PROGRAM, THE STATES WILL BE ASSUMING A LARGER PORTION OF THE RESPONSIBILITIES FOR THE NATIONAL PROGRAM.

WE, IN THE STATES, ARE FIRMLY CONVINCED THAT WE ARE WELL EQUIPPED TO OPERATE THIS PROGRAM. WE KNOW HOW TO WRITE AND ISSUE PERMITS. WE KNOW HOW TO WRITE REGULATIONS. WE KNOW HOW TO ENFORCE ENVIRONMENTAL LAWS AND RULES. WE HAVE BEEN DOING SO IN A NUMBER OF ENVIRONMENTAL PROGRAMS FOR MANY YEARS. IF WE ARE INEXPERIENCED, PERHAPS IT IS IN THE MORE RECENT CONCEPTS OF PUBLIC PARTICIPATION, BUT WE ARE LEARNING FAST.

OUR COMMITMENT TO SEEK PRIMACY IN STATE PROGRAMS AS PROVIDED FOR IN RCRA AND IN KEEPING WITH THE INTENT OF THE CONGRESS REMAINS THE HIGHEST ENVIRONMENTAL PRIORITY IN MANY STATES. BUT FACED WITH SEVERE BUDGETARY PROBLEMS CAUSED BY THE PRESENT RECESSION AND SO CLEARLY DESCRIBED BY MY COLLEAGUE REPRESENTING NGA, THE STATES ARE ALSO FACING THE PROSPECT OF INADEQUATE FEDERAL FINANCIAL SUPPORT IN HAZARDOUS WASTE MANAGEMENT AND IN OTHER IMPORTANT ENVIRONMENTAL PROGRAMS. OUR RESOLVE TO SEEK FEDERAL AUTHORIZATION OF STATE PROGRAMS HAS NOT WEAKENED. OUR ABILITY TO DO SO QUICKLY, IS CERTAIN TO BE AFFECTED BY INSUFFICIENT FEDERAL FINANCIAL SUPPORT.

FOR EXAMPLE, IN FY81 EPA ESTIMATED THAT THE STATES USED 363 WORK YEARS FOR PERMITTING. THE SAME DOCUMENT PREDICTED THAT IN FY84, PERMITS BY THE STATES WILL DEMAND 2375 WORK YEARS -- 6.5 TIMES MORE WORK. TO AMPLIFY THIS CONCERN, THE STATE OF MASSACHUSETTS PRESENTLY EMPLOYS 75 PERSONS TO PERFORM HAZARDOUS WASTE TASKS. THE STATE ESTIMATES, BASED ON EPA CRITERIA, THAT AN ADDITIONAL 145 PERSONS (FOR A TOTAL OF 220) WILL BE NECESSARY WHEN THE PROGRAM IS FULLY IMPLEMENTED.

IF THE EPA REMAINS THE LEAD AGENCY FOR REGION III, WITH NO AUTHORIZED STATES, THE REGION ESTIMATES THAT IT WILL TAKE 15 YEARS TO ISSUE THE RCRA PERMITS. EVEN IF PENNSYLVANIA AND MARYLAND, THE LARGEST PROGRAMS IN REGION III, RECEIVE DELEGATION, IT WILL TAKE EPA 8 YEARS TO ISSUE THE PERMITS FOR THE REMAINING 4 STATES IN THE REGION. ADEQUATELY FUNDED STATE PROGRAMS ARE CRITICAL TO DISTRIBUTING THE WORKLOAD AND PROVIDING EFFICIENT DELIVERY OF SERVICES.

THE INTENSITY OF RESOURCE DEMANDS ON THE STATES IN THE RCRA PROGRAM IS NOT LIMITED TO PERMITTING ACTIVITIES. DURING THE SAME TIME FRAME, FY81 TO FY84, MANPOWER DEMANDS WERE PREDICTED BY EPA TO INCREASE 25% IN ORDER TO ASSURE COMPLIANCE WITH THE REGULATIONS AND/OR PERMIT CONDITIONS AND MANIFEST SYSTEM ACTIVITIES. THIS DOES NOT INCLUDE GENERAL PROGRAM ADMINISTRATION.

IN ADDITION TO EXECUTING THOSE PORTIONS OF THE ACT FOR WHICH EACH STATE IS AUTHORIZED, AND TO UPDATING THE STATE'S PROGRAM WHEN FEDERAL CHANGES ARE MADE, THE MANPOWER INTENSIVE NEGOTIATION PROCESS STATES MUST UNDERTAKE TO RECEIVE FINAL AUTHORIZATION FROM EPA WILL PLACE ADDED DEMANDS ON THE STATE'S TOTAL WASTE MANAGEment budget in FY84. The States are observing a trend of increasing time demands for this process, and such negotiations remove persons from the field and place them behind a desk. EPA estimates that it will cost a State $5,000 to obtain final authorization (this figure was submitted to OMB by EPA under the Paperwork Reduction Act and Executive Order 12291 on January 31, 1983). To confirm the Agency's estimates, ASTSWMO polled its membership on what States had spent and estimate for cost per State was $44,000. The States' projected costs are eight times higher than EPA's! Only 4 out of the 20 calculated costs to be near those presented by the Agency. One State estimated costs of 25 times what EPA projected.

These aggregate numbers suggest that the workload for the States in FY84 are seriously underestimated by the Agency. For that reason, the Association concurs with the Congressional Budget Office's April, 1983, analysis that the most glaring flaw in the Administration's proposed EPA FY84 is that of the shortfall between the Agency's recommended State grant levels and the real needs of State waste management programs for the implementation of the federal statutory mandate.

To supplement federal funds the States have requested, and in many cases received, increasing amounts of State revenues to support solid and hazardous waste management programs. States are seeking and utilizing other sources of revenues such as permit and license fees to offset some of the costs. In many cases, these revenues are placed in the State's General Fund. Hazardous waste programs must then compete for funding with many other pressing social and economic programs. States are struggling to raise the required matching funds to full participate in the Superfund program in response to extremely heavy public pressure in this area.

Let me remind you of what has happened in the RCRA program since Subtitle D, federal funds have disappeared. One component of the Subtitle D program was a national inventory of open dumps. This was the first use of a national standard to determine the status of non-hazardous waste land disposal sites. Sites that met the national minimum standard were to be classified as sanitary landfills. Those that failed were to be classified as open dumps and closed or placed on a schedule for upgrading. Funds were removed from the federal budget for this purpose in Fiscal Year 1981. The Open Dump Inventory remains far from complete. A survey by the Association has shown that only 23 States have completed the inventory. Twenty-four have not and of these, 21 will not be able to complete the inventory because of budget constraints. These States have reverted to a reactive program of immediate problem solving rather than a proactive program of comprehensive waste management and prevention. No one can predict just how many of these operating open dumps may some day cause future pollution and health problems because they were not phased out or upgraded.

Yet State grants are not the only FY84 budget item which impacts the delegation and implementation of RCRA. Inadequate research monies will delay formulation of a sound and technologically defensible policy and hinder en-

FORCEMENT ACTIONS BY THE REGULATORS AS WELL AS DELAYING THE ESTABLISHMENT OF CRITERIA FOR FACILITIES OR REMEDIAL ACTION ACTIVITIES UNDER SUPERFUND.

FOR EXAMPLE, A CRITICAL UNMET RESEARCH NEED IS LABORATORY MEASUREMENT GUIDELINES FOR WASTE CHARACTERIZATION AND MONITORING FACILITIES. ASTSWMO'S STATE MEASUREMENT NEEDS STUDY, PERFORMED FOR THE NATIONAL BUREAU OF STANDARDS, CLEARLY SHOWS THE NEED FOR ACCELERATED RESEARCH AND DEVELOPMENT FOR LABORATORY AND FIELD TEST METHODS AND PROCEDURES. WITHOUT THIS, FORMULATION OF RCRA QUALITY ASSURANCE STANDARDS CANNOT BE ACHIEVED. WITHOUT AN EFFECTIVE FEDERAL RESEARCH PROGRAM, A NATIONAL COMPREHENSIVE RESEARCH AND DEVELOPMENT FOR HAZARDOUS WASTE MANAGEMENT WILL NOT OCCUR. THE STATES CANNOT AFFORD TO FINANCE AND TO COORDINATE ACTIVITIES IMPORTANT TO NATIONAL STANDARDS. SUCH A STATE BY STATE APPROACH TO RESEARCH WOULD PROVE BOTH COSTLY AND DUPLICATIVE. AN EXAMPLE OF THE RESOURCES AVAILABLE THROUGH STATE RESEARCH FUNDING SHOULD PROVE INSTRUCTIVE. ONE OF THE ASTSWMO OFFICIALS EXPRESSED PRIDE RECENTLY IN HIS STATE'S SETTING ASIDE MONIES FOR HAZARDOUS WASTE RESEARCH. HE TELLS ME THAT FEW STATES HAVE THE FISCAL FLEXIBILITY TO EARMARK FUNDS FOR RESEARCH AND DEVELOPMENT. YET, HIS STATE, EVEN WITH IMPORTANT EMPHASIS ON RESEARCH, HAS ONLY $300,000 IN ITS ANNUAL BUDGET. PLEASE KEEP IN MIND THAT SUCH A SUM REPRESENTS ONLY A HANDFUL OF RESEARCHERS FOR A FIELD THAT REQUIRES EXPENSIVE, STATE-OF-THE-ART LABORATORY EQUIPMENT AND HIGHLY TRAINED PERSONNEL.

RESEARCH IS A PROPER FEDERAL FUNCTION. THE STATES DO NOT HAVE ADEQUATE STAFF NOR RESOURCES TO SUPPORT SUCH PROGRAMS. THE STATES ARE RESPONSIBLE FOR UTILIZING NATIONALLY DEVELOPED INFORMATION CONTAINED IN STANDARDS AND FOR MONITORING THESE STANDARDS. BUILDING ON THESE RESULTS, THE STATES ARE RESPONSIBLE FOR ENFORCEMENT AND COMPLIANCE ACTIVITIES.

IN CLOSING, IF FEDERAL SUPPORT OF OUR HAZARDOUS WASTE PROGRAMS CONTINUES TO REMAIN INADEQUATE, STATES WILL BE FORCED TO REPRIORITIZE THEIR WASTE MANAGEMENT ACTIVITIES TO MAINTAIN PROTECTION OF THE PUBLIC HEALTH AND ENVIRONMENT. SOME STATES MAY THEN BE UNABLE TO QUALIFY FOR PROGRAM AUTHORIZATION. THE ASSOCIATION SUPPORTS A THOUGHTFUL, LONG-RANGE FEDERAL DECISION TO ADEQUATELY FUND THE RESEARCH NEEDED FOR DETERMINING WHICH CHEMICALS ARE HAZARDOUS AND HOW TO MEASURE SUCH TOXICS, TO ADEQUATELY FUND THE INVENTORIES NECESSARY FOR GOOD STATE REGULATORY DECISIONMAKING AND TO ADEQUATELY FUND STATE PROGRAMS SO THAT SUCH PROGRAM WILL NOT BECOME VICTIMS OF ECONOMIC PROBLEMS.

HAZARDOUS WASTE MANAGEMENT IS A WORTHY INVESTMENT. IT IS THE KEY TO TURNING OFF THE TAP ON FUTURE SUPERFUNDS AND PREVENTING HARM TO THIS NATION'S PUBLIC AND TO THIS COUNTRY'S ENVIRONMENT.

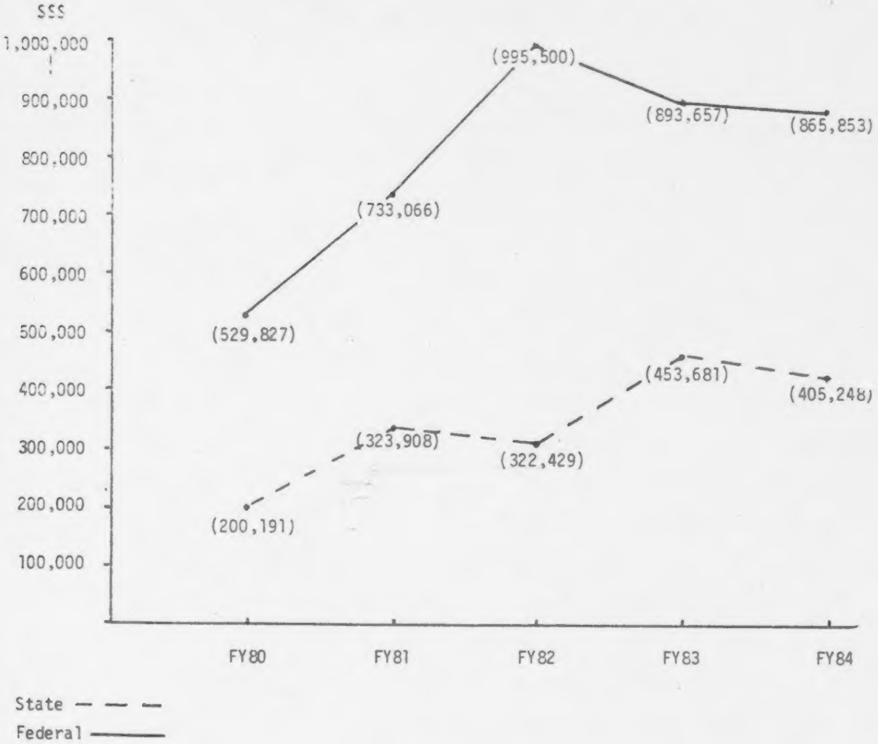
THANK YOU.

Subtitle C Activities

Average Amount Spent Based on 19 State Respondents to

ASTSWMO Survey of Funding Levels for Subtitle C Activities

State/Federal Match FY80 - FY84

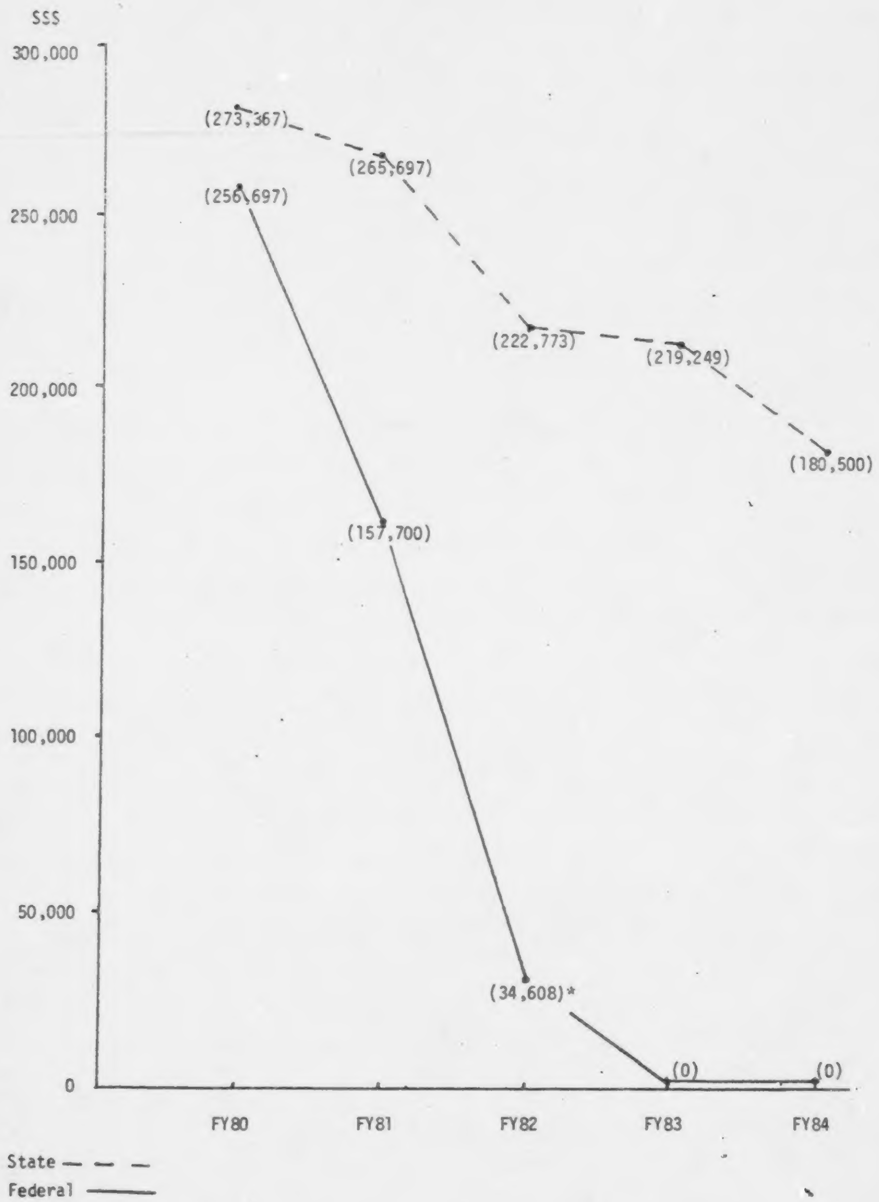


Subtitle D Activities

Average Amount Spent Based on 20 State Respondents to

ASTSWMO Survey on Funding Levels for Subtitle D Activities

State/Federal Match FY80 - FY84



* Federal FY82 figure -- carryover funds and obligated monies from FY81

STATEMENT OF THOMAS EICHLER

Senator GARN. Mr. Eichler?

Mr. EICHLER. Thank you, Mr. Chairman.

I am Tom Eichler. I am director of environmental control for the State of Delaware. I am also a member of the board of direction of the Association of State-Interstate Water Pollution Administrators. That is the largest title of all, but our association includes all 50 States, a half-dozen interstate commissions who are involved in water quality, as well as territories and the District of Columbia.

We, too, are faced with the same type of situation that the States are faced with with regard to the other types of programs. I think, though, even more drastically, the administration's proposal to cut the section 106 funds under the Clean Water Act 56 percent has absolutely a drastic impact on the programs that we run.

I think it is important to realize that the States currently operate at least 70 percent of the water pollution control program in this country through the delegations that have been made. Thirty-five States operate the NPDES program directly. Forty-four States operate the construction grants program, which is also through delegations, and many of these States operate other delegations in the broader area of the conservation and Drinking Water Act and so on.

I think it has been a consistent practice of the States to assume these delegations and, wherever possible, the feasibility of doing this is dependent in large part upon the stability of the Federal program and the opportunity to make a smooth transition to the State level.

I think it is also important to note that in section 106 grants, approximately 75 percent of that goes for the NDPES program itself; about 20 percent goes for monitoring; and the rest for other related activities.

We did a survey earlier this year when the administration's budget request was made public to ask our members what these cuts, as proposed, would mean for them. In many cases, we are talking about reducing or eliminating the levels of training that we do for the treatment plant operators.

If you look at the billions of dollars that have already been spent and will be spent over the next few years to build municipal treatment plants, then think about the prospect of the States not being able to operate adequate training programs for the operators of those plants and for the licensing that goes with it, it makes you wonder what kind of protection there is for that very expensive capital investment that has been made and whether or not we will actually see the results of that in the water quality in our streams.

We also got reports back from the States that they would have to reduce the amount of compliance inspections that they do. This would absolutely come back in terms of the nunbers of compliance actions taken; the preventative measures that seeded industries and dumpers don't get out of compliance, and, then, also the actions that they would be taking as effectively to enforce compliance through the courts when necessary.

The monitoring also would be reduced. We think that these kinds of activities are vital to the program, but they are also directly supported from the 106 grant.

Senator Stafford mentioned a few minutes ago that there has been an actual 33-percent reduction in the 106 funds simply through the impact of inflation. States have already accommodated those kinds of reductions. EPA has said that we can afford a further reduction because of several factors:

First of all, the regulatory reform. The fact is, we haven't had any regulatory relief in terms of how these programs operate, and some of the reforms that have been anticipated would actually mean a greater level of engineering, evaluation at the State level to make them work.

We are not opposed to that, but we think it is important to point out that they actually do require more sophistication in terms of the application.

Section 205–G funds has been pointed out as a possible way of making up for some of the reduction. I think it is important to note there that most States have little or no 205–G funds left over between the cost of actually running the construction grants program. They see that as a very deep and important commitment, one for which they are being held accountable.

There is a great deal of accounting, and the adequate amount of money in that is very central to their money, and most of them don't have anything left over from what the 1981 amendments allowed for it. Section 205–J has also been mentioned as a possible supplement.

Here again, these funds are targeted for advanced treatment reviews, and there is also a commitment in the law that designated agencies be given priority and so on. There is also restrictions for how that money can be used, so there is a very limited amount of replacement coming from that section. Both 205–G and 205–J comes out of the construction grants allocation. To the extent that they are spent on operational activity, they cannot be turned into actual construction.

In many of our States, there isn't enough construction dollars to do the job.

Finally, permit fees have been recommended. I think there are some 20 States that have instituted one kind of permit fee schedule or another. In Delaware, we have one going into effect on July 1. It has been the case that in most States, however, that as a practical reality, permit fees are only going to be a modest supplement to the funding.

In Delaware, we have targeted our permit fees to make up the difference between static Federal funding and the impact of inflation. That is about all that we could get a consensus on in our regulated community and from our general assembly in terms of the level of fees.

I estimate that our fees will amount to less than 5 percent of our operating budget for our State. I think that experience varies considerably around the country, but I think it is important to note that fees are something that takes a considerable amount of time to put together.

There is a great deal of State legislature involvement; there are many policy questions with regard to the accountability for the funds. Whether or not they revert to the general revenue or whether or not they are earmarked for particular purposes, different approaches and philosophies and so on have to be developed.

In some cases, you even have to have a referendum in order to set these fee schedules. While we as States believe there is a definite role for fees, we believe it will be many years before this is all implemented and worked out, and it is going to be very uneven, in any case, as it takes a modest supplement to get the sources of funding.

I would like to say also that our program is not static. We do feel a great challenge in front of us. I mentioned the need to do more with municipalities to insure adequate operation of their treatment plants.

We would also like to be more stream quality oriented and not just worry about what the standards are at the pipe, but to get back into the streams and see whether or not we have made adequate waste allocations or whether or not the pressures for growth and development are adequately being dealt with in our regulatory program.

This is a very effective effort we would like to undertake, have been undertaking in part, but it is kind of on hold, and we would like to do more with it. The questionable situation with our funding is really holding that back.

Finally, we, too, are concerned with regard to toxics in the wastewater stream. Through the pretreatment program and other developments, we would like to come to grips with that.

Here again, this requires a great deal of particular sophistication to approach it. We would like to do it; we have a capability, but we are kind of on hold with what we would like to get on with there.

I will just mention from a personal sense that the General Accounting Office did a survey about 1½ years ago and visited several States to test out the idea of the New Federalism in the environmental program.

They visited Delaware. They visited our Governor's office and our general assembly, and I talked with them on the way back. They said that basically, people want to take the delegations on at the State level, but they are not willing to take over the funding.

The level of funding is vital. It is very important to realize, for example, in our State, our State revenues are down this year. There will be no salary increases for my particular staff, which means that as the economy gets going again—and my particular staff is part of a larger private sector jobs pool—we will be less competitive than we are already.

States are feeling this kind of a pinch, and if we don't see any relief from it, what we would like is an appeal for today to have Congress get involved in reviewing that partnership between the Federal Government and the States.

What are adequate levels of funding? Are there some kinds of formulas that should be applied? What is a modern, up-to-date rationale that ought to govern these moneys so that, hopefully, we can come away with some degree of practicability and stability in our programs so that every year we don't have a big question mark over what our funding is going to be.

Last year, Congress did review our proposed cuts. I think they did it September 29 a couple of days before the fiscal year began. We haven't gotten the last of our 106 grants for this Federal fiscal year that we are dealing in.

I am having trouble meeting my payroll this year in terms of the way the funds come through. With this view in mind, I would invite you to review the partnership in its financial terms and ask you to come up with something with a larger ability to it than that we have.

Thank you.

Senator GARN. Thank you, gentlemen. We will have some questions for you to respond to, but we are running out of time, so I thank you, very much.

[The statement follows:]

STATEMENT OF THOMAS P. EICHLER, DIRECTOR, DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, ON BEHALF OF THE ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS

Mr. Chairman, Members of the Subcommittee:

I am Thomas P. Eichler, Director of the Delaware Department of Natural Resources and Environmental Control, and a member of the ASIWPCA Board of Direction. I am here today representing the Association of State and Interstate Water Pollution Control Administrators (ASIWPCA) on the issue of Fiscal Year 1984 appropriations to Clean Water Act programs. The Association appreciates this opportunity to participate in the appropriations process and commends the Committee for its interest and commitment to the environment.

The Association is a National, nonpartisan organization of the State officials who, on a daily basis, implement the Act. All 50 States, 6 Interstate Agencies, 3 Territories, and the District of Columbia are represented.

As professional managers of State Water Programs, ASIWPCA is firmly committed to environmental objectives set out in the Clean Water Act. The Association has more than 10 years experience administering the vast majority of the National Water Quality Program and is uniquely qualified to comment on the Fiscal Year 1984 appropriation needs under the Clean Water Act.

A. EXECUTIVE SUMMARY

1. THE PRESIDENT'S BUDGET AND FY84 PROGRAM NEEDS

Stability is vital to continued Clean Water Act progress. As long as there are substantial Federal interests, embodied in the Act and articulated through Federal regulations, the concept of a partnership with the States must include an adequate Federal financial commitment.

The Association welcomes the Administration's continued support for municipal wastewater treatment. Construction grants funding at the full authorized level is essential for implementing the 1981 Amendments.

However, the President's proposal to decrease §106 funding by $30 Million from FY 83 levels (-56%) is a serious retreat by the Administration from the environmental goals of this Nation. Such action would devastate the States' ability to control toxic pollution and otherwise implement the goals of the Clean Water Act. It is incongruous, at a time when the State workload is increasing many fold, that such drastic reductions could be contemplated. The President's budget for §106, if adopted, would have far reaching effects on public health and the environment:

- **The hard earned, costly progress in water pollution abatement achieved under the Clean Water Act may be lost if the State institutional capability to control conventional and toxic discharges is forced to erode.**

- **The next phase of water clean up will be far more complex and challenging than the first.** Responsibilities now being assumed by States far exceed those encountered in the first decade, but cannot be met with reduced resources.

- ASIWPCA members are convinced that toxic BAT controls must be established and enforced . After years of delay, US EPA is finally meeting court deadlines. Sustained Federal support will be required for implementation.

- Assuming full implementation of BAT, States must turn their attention to the program's adequacy in eliminating toxicity -- toxicity is yet to be quantified, let alone managed. The Administration ignores the next program vista.

2. ALTERNATIVES TO §106 STATE MANAGEMENT ASSISTANCE

The Administration maintains that a 56% reduction in §106 funding will have no impact because economies have been instituted and other resources are available to implement the Clean Water Act. The Association disagrees -- there is no short term substitute for a decrease in §106 funding.

Efforts to streamline Federal requirements are desirable, but will not offset a 56% reduction in resources, particularly considering the growth in requirements and inflation. Recent developments also indicate State budgets cannot offset a decline in §106 support to the Federally mandated program. The Administration, further, suggests that other Federal funds are available to offset the reduction. This simply is not the case:

- §205(g) funding is needed to manage the Federal construction grants program -- only a minimal amount is available for permitting and enforcement.

- §205(j) funding is intended to implement the 1981 Amendments (e.g. advanced treatment reviews) and cannot legally be used to support many §106 activities.

- Permit fees have long term potential but are generally not feasible in the short term because enabling legislation has yet to be enacted.

3. ASIWPCA RECOMMENDATION

The Association's position supports that of the nation's Governors urging that §106 funding be, at a minimum, maintained at FY82 levels and that Construction grants be appropriated at the $2.4 Billion authorized level.

ASIWPCA also recognizes that National Water Program needs far exceed this level in such priority areas as State:

o development of alternatives to Federal construction grants. Municipalities are the major pollution problems and must be prepared to meet their responsibilities.

o Restoration of the public confidence in the elimination of toxicity

B. THE NATIONAL WATER PROGRAM -- A DECADE OF PROGRESS

The 1972 Amendments to the Clean Water Act made sweeping changes in National policy on industrial and municipal wastewater control, striking a balance between water quality and technology based programs. That strategy, 10 years later, continues to be effective.

States have continually demonstrated their capabilities and support for a strong clean water program. The Association believes the substantial progress achieved under the Act is in large part attributable to the State/Federal partnership established in the Clean Water Act:

- Except for limited stream segments and water bodies, the Nation's waters can support fishing and swimming
- States now manage over 70% of the National Water Program
- Pollution loading have been substantially reduced, particularly for conventional pollutants
- Billions have been invested by taxpayers and industry in water pollution control

C. CHALLENGES FOR THE FUTURE

The Association is keenly aware that major challenges lie ahead. All of these new and expanded tasks will require more State resources as well as adequate and stable support by the Federal government. States must direct their attention to:

- **municipal compliance** in the face of the declining Federal commitment to construction grants.
- **toxics controls:**
    1) implementing BAT and eliminating the permit backlogs in the NPDES program -- Over 50% of NPDES permits have expired because of burdensome requirements and repeated delays in toxic BAT effluent guideline promulgation.
    2) developing a workable National pretreatment program
    3) establishing a National strategy for eliminating toxicity including strengthened bioassay and biomonitoring
- **Creating an advanced treatment review** process which is more efficient and effective.

D. SECTION 106 STATE MANAGEMENT ASSISTANCE GRANTS

1. §106 -- THE FOUNDATION OF THE CLEAN WATER ACT

National Clean Water Act policy is implemented through a State/Federal partnership. States manage the overwhelming majority of the National Program. §106 is, in essence, payment to States and Interstate Agencies for their contractual agreement to manage the National Program. To date, this arrangement has been very successful. The States manage over 70% of the National Program:

- 35 States have NPDES delegation
- Over 70% of NPDES permit and enforcement actions are taken by States -- not US EPA
- 66% of toxic BAT permits for major industries must be issued by the States.

§106 funding supports such activities as State Water Quality Standards, monitoring, permit issuance, compliance, enforcement, emergency response, and the development of water quality based controls. The vast majority of the funding (75%) goes to support the NPDES program, while monitoring receives 19%. While §106 funding is critical to maintaining quality State NPDES delegated programs, non-delegated States also administer a substantial number of NPDES activities for US EPA.

2. IMPACTS OF THE PRESIDENT'S BUDGET

As the most mature environmental media, water has taken numerous streamlining measures over the last five years. This was imperative as responsibilities increased under the 1977 and 1981 Amendments and funding remained constant. The program is now quite efficient and economically lean. A 56% cut in §106 translates directly into reduced State personnel support to the National Water Program as the attached tables illustrate for select States.

2.1. NPDES Program Workload Will Increase With BAT and Pretreatment

The Clean Water Act created the NPDES permit program as the mechanism for regulating pollution from industry and municipalities. Now that conventional pollution is coming under control with secondary treatment and Best Practicable Treatment (BPT), permits must be expanded to cover toxic pollution using pretreatment and BAT. By 1984, toxic guidelines will be promulgated for 21 primary industrial categories of most environmental concern.

The State workload will increase, but the President's FY84 budget fails to recognize this fact. Pretreatment and BAT requirements must be incorporated into NPDES permits, monitored for compliance, and enforced. This will be a massive undertaking involving thousands of municipal and industrial sources and over a hundred toxic parameters. If §106 resources are reduced:

- Economic recovery may be stalled because new industrial facilities will require permits.
- With staffing limitations, the timing for permit issuance will be extended
- States will have limited ability to develop toxic NPDES control requirements.
- The compliance and enforcement program, already under serious challenge, could start to unravel.

It is important to note that the US EPA budget has no contingencies in the event that States cannot shoulder the NPDES responsibility. Up to $10 Million would be required by US EPA simply to reassume the NPDES program from the 35 delegated States. The costs, then for US EPA to manage these reassumed NPDES programs, would be substantially higher than at the State level. Since US EPA has no funds to replace any lost State NPDES capability, the credibility of the water program could well be at stake.

2.2. Elimination of Toxicity -- The Next Vista

We, in public service, must restore the public's confidence in our ability to control or eliminate toxicity. BAT and State Water Quality Standards are necessary components of the National Water Program, but may not be adequate to effectively and efficiently eliminate adverse toxic impacts.

Elimination of toxicity is **the next logical step** in the water program. Specifically, a technically sound process must be developed at the National and State level to assess and control toxicity on a facility specific basis. Dialogue in the Clean Water Act reauthorization has focused on this issue and the Association is working to see that a National policy emerges.

It is ASIWPCA's position that a National Toxicity Elimination and Management Strategy (TEAMS) should provide that:

- **US EPA,** in conjunction with the States, establish: procedures and methods for biological assessment; guidance on industries and municipalities of potential concern; specialized technical assistance to States; and adequate toxics research and development.

- **States** develop strategies for eliminating toxicity using the NPDES permit process for compliance.

- **NPDES permitees** characterize their effluent and conduct biological toxicity assessments.

Elimination of toxicity will be a priorityconcern in the FY84 National water program. While additional funding would be desirable, interim progress must be made because the alternative --i.e. continued delay -- is unacceptable to the public and State environmental program managers. In fact, approximately 12 States are now using biological assessments in cooperation with industrial dischargers. Over the long term, however, elimination of toxicity will be a significant undertaking which , under the President's budget, would be unattainable.

2.3. Planning and Monitoring Support

Planning and monitoring, as smaller program activities, would be particularly hard hit. Their contribution to the water program would be limited to the point that their continued viability would be questionable:

- sound, protective BAT permits would be very difficult to develop without adequate monitoring support

- toxic analytic capability would be curtailed at a time when the need is expanding

- the National ambient or trend monitoring network would be severely restricted

- Water Quality Standards development would be slowed, limiting the States' ability to cost-effectively allocate resources and make sound water quality based decisions.

3. ALTERNATIVE FUNDING SOURCES -- THE DETAILS

There is virtually no short term substitute for a 56% reduction in §106 funding. In the current economic climate, State budgets are very tight. While the Administration claims that economies can be achieved and that other Federal funds are available, we cannot accept their rationale.

3.1 Regulation Reform -- A Budget Reducer?

ASIWPCA has been a vocal supporter of regulation reform for many years and has taken a leadership role in streamlining the National Water Program. Such measures are necessary to more efficiently manage a growing, delegated program in the face of resource constraints. However, the budgetary impacts projected by the Administration for such reforms are grossly overestimated. Moreover, we have seen little in the way of reforms under this Administration. In fact, requirements have increased.

3.2 Section 205 Is Not A Reasonable Alternative

The Administration suggests less §106 funding is needed because set asides under Section 205 can offset the 56% reduction proposed by the President. ASIWPCA disagrees. Set asides under §205(g) and 205(j) of the Act have purposes separate and distinct from activities supported by §106. these set asides cannot offset reductions in §106 funding without seriously endangering Title II objectives.

i) **205(g) funds are necessary to meet state obligations under construction grants delegation agreements.**

- 205(g) funds available to offset reductions in Section 106 funding are **minimal**
- **Non-delegated States have** no 205(g) funds (i.e. FL, VA, NM, OR, LA, and IN)
- A portion of 205(g) funds must be **held in reserve** for State management after phasedown of the National program

ii) **205(j) funding generally cannot support §106 activities.**

- 205(j) is targetted by law to **general planning, particularly in local communities**
- **Most Section 106 activities are not eligible** (e.g. permitting, compliance and enforcement)
- **205(j) is not administered like §106.** Funding is project oriented and has been very difficult to obtain. In contrast, virtually all FY82 and FY83 §106 grants have been awarded.
- 205(j) funding is **was intended (and is needed)** just to implement the 1981 Amendments -- specifically:

  Water Quality Standards review and revision, and **Advanced treatment** reviews.

- Every dollar set aside for §205(g) and(j) is a dollar **not available for construction of** needed treatment facilities

3.2 Permit Fees Have Limited Potential in FY84

Permit fees have been discussed as a substitute for reduced Federal funding. Approximately 20 States have fee systems for water permits and 3 more are considering establishment. In the overwhelming majority of these States, the revenues are nominal. Fees require a change in State statute and tend to flow into the State general operating fund rather than back into the program responsible for its generation.

There is a legitimate role for fees in the water program. However, such systems have unclear potential and require further study. Administrative costs can be high -- fee systems may be a modest supplement to existing State/Federal resources.

E. MUNICIPAL WASTEWATER TREATMENT CONSTRUCTION GRANTS

1. Need For National Program Stability

The construction grants program grew out of the recognition that inadequate municipal sewage treatment was a major cause of the nation's water pollution. Since local finances were constrained and most waters run through several States, a Federal program was perceived as the most assured way of attaining proper treatment levels. This cost sharing program is a central and indispensible part of the strategy for achieving Clean Water Act objectives.

As treatment plants came on line, substantial reductions in pollutant loads have been achieved. The State ability to maintain water quality, as wasteloads increased, may be an even more meaningful indicator of progress.

Title II construction grants, more than any other part of the Act, has suffered from fluctuating National support and policy. The 1981 Amendments to the Clean Water Act set the long term direction for the Federal program. ASIWPCA supported the reduction in construction grants funding from $5 Billion to the $2.4 Billion authorized level contingent upon program funding at the newly authorized level beginning in FY82. This sustained level of Federal commitment was necessary to implement the 1981 Amendments and transition to an increased level of local responsibility.

The basic issue in the FY84 appropriations process is one of continued Federal commitment to the National program. After some delay in revising State priority lists to reflect changes in the law, the program is gaining momentum and appropriations at the full authorized level are sorely needed.

2. The Growing State and Local Responsibility

As industries come into compliance with the Act, municipalities have become the major concern. The Association recognizes the demand for municipal construction exceeds the Federal funding available. Local communities will have some difficulty meeting their increased responsibilities. For this reason, ASIWPCA has launched a major initiative to examine alternative sources and recently completed a very successful national technology exchange seminar for the 50 States.

A National Municipal Compliance Strategy coordinating the activities of the State Water Quality Standards, NPDES, and construction grants programs is a step in the right direction. ASIWPCA has urged such an integrated approach over the years and remains committed to working with local communities. We are hopeful that such efforts, in conjunction with a realistic National program, will bring municipalities into compliance with the law in a reasonable time frame. Considerable State effort will be required to manage the initiative and assist local communities.

E. APPROPRIATIONS AND THE NEED FOR A BALANCED WATER PROGRAM

The Association does not support returning to a pre 92-500 water quality based program. A balanced approach using technology and water quality considerations is necessary and should be preserved in the appropriations process. Specifically:

1) **An adequate baseline of environmental protection and National uniformity** must be maintained. US EPA must promulgate strong minimum technology requirements (i.e. BPT, BAT, and secondary treatment).

2) Attention should be directed not only to **compliance, but also to the adequacy of controls** to achieve fishable/swimmable water quality and eliminate toxicity.

3) **US EPA must fulfill its legal responsibilities** -- i.e. maintain oversight, technical assistance, and research and development. Interstate consistency and uniform application of US EPA policy is particularly important.

4) **Delegated State management is essential** for an effective water program

5) **Federal funding commitment to the Clean Water Act partnership must be commensurate with Federal mandates.**

QUESTION:

As you note in your statement, the National Clean Water Act policy is implemented through a State/Federal Partnership. States manage the overwhelming majority of the National program and the Section 106 program supports such activities as State water quality standards, monitoring, permit issuance, compliance, enforcement, emergency response, and development of water quality based controls. You also note, as I did during our US EPA hearing, that the Section 106 grants are proposed to be decreased by 55.7%.

Let me step back for the National picture for a moment and ask you what specific impact this reduction would have in your States?

ANSWER:

Although each State is unique, a pattern vis a vie a 56% reduction in Section 106 State Management Assistance Grants has emerged. There are several areas of concern. Historically, §106 funds have been allocated as follows:

43%	Permits
32%	Enforcement
19%	Monitoring
4%	Construction Management
2%	Nonpoint Sources

As BAT guidelines are promulgated over the next year, a substantial portion of State Water Programs must focus on issuing the BAT permits. This will be an intense effort. Not only will sophisticated judgements be required, but well over 50% of industrial permits have expired.

A 56% reduction in §106 resources would put States in a position of making difficult tradeoffs among program activities. Proportional reductions in water program activities (across the board) are not likely. Very little fat is left in the State program and activities must be prioritized to maintain their baseline performance capability. Small programs such as planning or monitoring could be decimated. Components of large programs such as permitting would be crippled.

Time does not permit a State by State analysis of the likely outcome of a 56% reduction in Section 106 resources, but ASIWPCA has developed the information for a sampling of States which responds to your question:

Table I outlines the substantial permitting and toxicity control needs which must be addressed. A great deal of this permitting and compliance activity must occur in FY84 since virtually all permits must be rewritten based on new requirements.

Table II summarizes projected State responses to a 56% reduction in Section 106 funding. Individually the impacts on program areas are significant -- collectively, they would seriously undermine the States ability to maintain a balanced water program and function effectively in the partnership established in the Clean Water Act. This is most notable in the areas of:

- toxicity control/BAT implementation
- municipal compliance
- advanced treatment/water quality assessments
- revision of the Water Quality Standards, as called for in the '81 amendments to the CWA, will also require vast amounts of State resources. This too will need to be funded by the §106 pot.

Table I

REPRESENTATIVE IMPACTS OF THE PRESIDENT'S BUDGET ON TOXICS CONTROL

	State	FY83 Level ($M)	President's FY84 level ($M)	Number Permits*	Major Industry
Region 1	Connecticut	0.83	.36 (- .47)	58	metal plating
	Vermont	0.27	.12 (- .15)	5	paper,petroleum
Region 2	New York	2.99	1.30 (-1.69)	198	paper,inorganics metal plating
Region 4	Tennessee	0.99	.43 (- .56)	84	plastics, metal plating
	Kentucky	0.79	.34 (- ..45)	126	coal,organics petroleum plastics
	Mississippi	0.8	.35 (- .45)	17	inorganics,plastics petroleum
Region 5	Wisconsin	1.53	.67 (-0.86)	44	paper, metal plating
Region 6	New Mexico	0.32	.14 (- .18)	2	*
Region 8	Utah	0.34	.15 (- .19)	13	coal,petroleum
	South Dakota	0.25	.11 (- .14)	1	*
Region 9	Nevada	0.18	.08 (- .10)	3	*
Region10	Oregon	0.88	.38 (-1.81)	62	paper
	SUBTOTAL (% of Total)	10.9 (19%)	4.4 (18%)	613 (17%)	

* Significant, major primary industries (electric generation excluded from tabulation).

Table II: Projected Impact of the 58% Reduction in §106 Funding Proposed by the President's Budget In Select States

State	NPDES Permit Issuance	NPDES Compliance&Enforcement	Municipal Wastewater Treatment	Standards&Monitoring
Delaware	13% increase in permit delays	● 13% increase in delayed compliance ● 25% reduction in enforcement cases	eliminate O&M training & evaluation	● reduce intensive surveys ● 25% decrease in ambient stations
Georgia		● 50% reduction in Federal pretreatment program ● 50% reduction in compliance inspections	30% reduction in O&M training &inspections	50% reduction in monitoring
Illinois		● Postpone implementation of Federal pretreatment program ● 10% reduction in inspections		Suspend participation in Federal ambient monitoring network
Minnesota	● severely curtail toxic permitting ● 40-50% delay in permitting	● drop Federal pretreatment ● eliminate compliance monitoring for minors		● eliminate ambient monitoring ● severely curtail toxics monitoring assessment
Miss.	reduce permitting	poorer compliance overview		
Missouri		substantial decrease in inspections&compliance enforcement		
Texas	25% reduction in permit issuance	25% reduction in compliance assurance		25% reduction in monitoring&assessment
Utah*	eliminate NPDES permit activities	eliminate NPDES compliance monitoring		eliminate ambient monitoring & WQM planning
Wash.	delay permit issuance	● reduce compliance monitoring ● reduce attention to regulating major industry	eliminate O&M inspection	reduce ambient monitoring, water quality assessment, & intensive surveys

* Utah does not have NPDES delegation but has assumed substantial responsibility in assisting US EPA with implementing the NPDES program.

Note: Except where otherwise noted, the numbers contained in this document are based on US EPA statistics.

STATEMENT OF ANDREW A. HOLTAN, DIRECTOR, NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

Senator GARN. Mr. Holtan, director of the National Environmental Training Association?

Mr. Holtan, I know it is difficult; we only have 60 minutes.

I would appreciate it if you and any other future witnesses who are listening, if you could keep your comments to 5 minutes in fairness to about the 55 witnesses that still have to testify today and tomorrow.

Your entire statements will be put in the record.

Please go ahead.

Mr. HOLTAN. Thank you, Senator, and I will make every effort to keep that down to 5 minutes. I would like to thank you for the opportunity to provide testimony before this subcommittee.

The testimony is to express concerns of the membership of the National Environmental Training Association regarding the need for a national commitment to the development of a competent environmental work force. Although NETA is concerned with all sectors of environmental training, this testimony will concentrate on water quality and wastewater treatment. The urgency for training and the necessity for training applies equally, however, to the other areas of environmental training such as toxics and hazardous waste.

Our Nation is facing a tremendous challenge for the 1980's: Unemployment, a troubled economy, care for our elderly, and how to maintain an acceptable environmental quality.

The GAO publication, "Environmental Protection Agenda for the 1980's," poses three general questions: (1) What levels of control are needed; (2) how do we balance environmental protection with other equally desirable goals; and (3) how do we maximize the impact of the billions of dollars spent on the environmental controls?

For almost a decade now we have invested billions of public tax dollars in wastewater treatment facilities, and the projected total for the year 2000 will reach $57.3 billion. Clearly, we have a tremendous financial investment here, and by contrast, our investment in training to develop a competent staff to operate and maintain these facilities will be negligible.

In responding to the GAO's three basic questions, training is a significant factor in balancing environmental protection with equally desirable goals in that more can be done with less through improved productivity and cost effectiveness.

Training is also a major contributor to maximizing the impact of the dollars spent on environmental controls.

Competent and staff improvement combined reduced the enforcement costs, reduce chemical and electrical operational costs, and prolong the life of equipment through proper operation and maintenance.

A 1980 report by Hegg et al, identified the top three factors for poor plant performance as being: (1) Failure to apply the treatment concepts; (2) failure to understand pretreatment concepts; and (3) improper advice from advisors.

In these times of severe economic constraints, the emphasis on training is good business and represents the positive side of enforcement; enforcement without assistance is counterproductive.

The offer of training in concert with enforcement promotes cooperation and compliance in 1981; the U.S. Congress refused to accept the position that EPA's role in environmental training was finished.

The congressional add-on funds for 1982 are in place, and on site technical assistance is being provided to treatment faclilities which are not in compliance. Although it is too early to assess the effectiveness of this effort, one thing is clear: The State regulatory agencies and the training center are operating to attain compliance. In 1982, Congress again refuted EPA's position. The funds were again allocated as an add-on.

However, the allocation process was changed somewhat, and the drawback to this change in format was that the States, the regulatory agencies, and the training centers are becoming somewhat confused in that no one knows exactly who is going to be receiving what and that it is imperative that we develop a national plan that, in fact, clearly articulates the roles of the partnerships and the responsibilities of those individuals and agencies in that partnership.

Our recommendations are that while we support fiscal responsibility and reduction of Federal funding, we are opposed to indiscriminate elimination of all environmental training.

The association is an advocate of State self-sufficiency. However, we feel that the complete and sudden elimination of all Federal funds for environmental training was just simply too abrupt.

The States need a more orderly transition and timeframe in order to accept the responsibility for training as is their due.

As stated previously, then, we are equally concerned with financial and technical assistance to other areas of environmental training and implore that you recognize the need for a commitment to the development of a competent environmental work force and provide funding for environmental training.

I am thankful for the opportunity to provide this testimony and respectfully request that you consider our concerns and assume a responsible position in developing a competent and qualified environmental work force.

Senator GARN. Thank you, very much. Your time was 4 minutes, 23 and 18/100th seconds. [Laughter.]

Let me thank you for your help in the past with the subcommittee, and we would appreciate your continued help and assistance in helping the committee to define the respective training roles of the Federal, State, and local governments.

Thank you, very much.

Mr. HOLTAN. Thank you.

[The statement follows:]

STATEMENT OF ANDREW A. HOLTAN, DIRECTOR, NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

Introduction

This testimony is to express the concerns of the membership of the National Environmental Training Association (NETA) in regarding the need for a national committment to the development of a competent environmental workforce.

The NETA is a nonprofit Association supported by member dues. The membership of NETA include individuals employed by academic institutions, water and wastewater treatment facilities, governmental regulatory agencies at all levels, and the private sector (consulting firms, etc.).

Although NETA is concerned with all sectors of environmental training, this testimony will concentrate on water quality and wastewater treatment. The urgency for training and the necessity for training applies equally to the other areas of environmental training (air, solid waste, drinking water, toxic and hazardous wastes, noise, etc.).

Problem

Our nation is facing a tremendous challenge for the 1980's. We are searching for ways to cope with unemployment, deal with a troubled economy, care for our elderly and maintain an acceptable environmental quality.

As our elected Legislators you must balance the nation's resources to deal with these problems. Our major concern at this hearing is to address the issue of maintaining an acceptable environmental quality. The GAO publication "Environmental Protection Agenda for the 1980's" poses the three general questions:

> What levels of control are needed?
>
> How do we balance environmental protection with other equally desirable goals?
>
> How do we maximize the impact of the billions of dollars spent on environmental controls?

For almost a decade now we have invested billions of public tax dollars in wastewater treatment facilities. The EPA 1982 Needs Survey estimates that the backlog of current needs for wastewater treatment and interceptor sewers will cost an additional $35.4 billion. The projected total for existing growth facilities to the year 2000 will total $57.3 billion.

Clearly we have invested tremendous financial resources in water quality facilities. By contrast our investment in training to develop a competent environmental workforce to operate and maintain these facilities has been negligible.

Training is a significant factor in balancing environmental protection with equally desirable goals in that more can be done with less through improved productivity and cost effectiveness. Training is also a major contributor to maximizing the impact of the dollars spent on environmental controls. Competent staff improve compliance and reduce enforcement costs, reduce chemical and electrical operational costs and prolong the life of equipment thru proper O & M.

The transition from primary wastewater treatment to secondary treatment represented a quantum leap in technology for which the work force was ill prepared. Despite the tremendous investment of public tax revenues in the construction of highly technical wastewater treatment facilities, a 1981

GAO study reported that over 87% of the privately owned treatment plants operate improperly and that 31% are in serious violation of NPDES permit limitations. In many cases, permit limits were exceeded by 100 percent (1000 percent in some cases) often for periods exceeding one year.

A report in 1980 by Hegg et al identified the top three factors responsible for poor plant performance as:

1. Failure to apply treatment concepts;
2. Failure to understand treatment concepts;
3. Improper advice and guidance from advisors.

The International Joint Commission on the Assessment of Human Health Effects of Great Lakes Water Quality reported that "optional functioning" of wastewater treatment plants will require improved plant operator training.

The need for training is further substantiated when the demand and supply of qualified and competent environmental work force is examined. At present construction rates, an estimated 3000 additional environmental workers will be needed each year as projected by the draft copy of the 1990's Construction Grants Strategy Report. A 1980 Report by the American Academy of Environmental Engineers demonstrated how critical the problem of an inadequate work force is. The Academy's report showed a reduction in the number of graduates with an environmental degree and a reduction in the number of advanced degree candidates.

The ramifications are far reaching, not only is there a very limited supply of advanced degree graduates to continue the development of an environmental work force, but the limited supply of existing workers results in aggressive competition for the most competent. Because salary ranges are greater in the private sector and the Federal government, the states, counties, and local governments must settle for individuals less prepared to effectively deal with environmental challenges. As the 1982 GAO study of 140 water systems revealed there are a lack of funds and a lack of qualified personnel at state and local levels.

The result is that state and local governments will have an even greater need for environmental training to develop a competent work force. Few will be able to take a responsible position as they attempt to deal with inflation and significant reductions in all areas of Federal financial assistance. The necessity for training is intensified when staff and budget are extremely limited. Under these conditions employers such as local governments cannot afford to take the time and money to correct mistakes or to increase enforcement activities.

The supply of competent operating staff for treatment facilities is equally overtaxed. As previously noted, the two top factors responsible for poor plant performance are failure to understand and apply treatment concepts. Clearly there is a significant demand for developing the competency and skills necessary to properly operate and maintain these sophisticated, highly technical treatment facilities effectively.

In these times of severe economic constraints the emphasis on training is good business and represents the positive side of enforcement. Enforcement without assistance is counterproductive. The offer of training in concert with enforcement promotes cooperation and compliance.

Update on Training

Tremendous advances have been made in the field of environmental training and technical assistance. The U.S. EPA established extensive support services for technical assistance and training to include technical guidance, direct training and financial support for establishing local environmental training programs. The U.S. EPA National Training and Operational Technology Center (NTOTC) was established to disseminate this information, make training resources available, and coordinate training resources to minimize duplication of effort and maximize limited training funds. This responsible position has however deteriorated. Since 1973, 72% of the expenditures for O and M training have been rescinded and the staff in this area reduced to less than one in each of 10 regional sections and a handful at the Washington Office. The NTOTC has been completely eliminated.

With the guidance and assistance of U.S. EPA, State governments, academic institutions and associations established training programs for the environmental work force. Few programs were, however, established as self-sufficient programs. Many depended wholly or, in part, on training resources such as manuals and financial assistance from the U.S. EPA.

In 1981 the U.S. Congress refused to accept the position that EPA's role in environmental training was finished. The Congressional add on funds for FY82 are now in place and onsite technical assistance is being provided to treatment facilities which are not in compliance with operating standards. Although it is too early to access the effectiveness of this effort one thing is clear. The State regulatory agencies are cooperating with the 109b Training Centers (Training facilities constructed with funds from section 109b PL92500) who offer assistance in obtaining compliance and bring their own finances. The ties and relationships established in this effort will in many cases carry on beyond the term of this project.

There are however serious problems with the process of making grant awards. There were no provisions for evaluating the effectiveness of the training funds. Because of the disruption in the national training network, the funds were in some cases awarded to organizations who had no record of environmental training. Finally, there was still no commitment to formulating a National Plan to provide for the development of a competent environmental workforce.

In 1982 Congress again refuted EPA's position that the national responsibility for development of a competent environmental workforce is complete. The experiences of allocating the FY82 funds resulted in significant improvements in the allocation of FY83 funds. Funds were directed to conducting an evaluation of the FY82 Activities and to undertake the initial activities necessary to pave the way for the development of a National Plan to develop a competent environmental workforce. Also, for the first time environmental training funds will be awarded to all states. State regulatory agencies have become aware once again of the need for and benefits of training a competent environmental workforce and ties with the 109b Training Centers have been renewed. The drawbacks to this year's approach are that the constant change in how and to whom the funds should be allocated are confusing both the states and the 109b training centers. Neither knows what to expect or to plan for in the coming year. In short, we still need a National Plan. It is imperative that funds for FY83 be appropriated to strengthen the regulatory - training ties and to continue the process of developing a National Plan.

Successes

Everyone professes to acknowledge training as a necessary and critical entity. Private industry has long recognized that training is a cost effective activity. How cost effective? The U.S. EPA Office of State and Local Manpower Development Branch published a report in 1973 which stated that every dollar invested in training results in a savings of $91.

The training and development of a competent operating staff can reduce operating expenses in the following ways:

- Proper operation and maintenance of equipment reduces costly repairs and replacement as well as reducing energy (electrical) costs.

- Skills in computation, testing, and analysis reduce overdosage of costly chemicals.
- Proper operation and maintenance improve compliance thereby reducing costly enforcement action at all levels of government as well as reducing the need for reaction to enforcement orders.

The end result is a more cost effective pollution abatement effort.

Training can often represent the difference between compliance and non-compliance. The January 1981 edition of the journal "Water/Engineering and Management" reported on a wastewater treatment facility in Durham, N.C. which consistently exceeded the NPDES permit limitations. After attending an EPA workshop on "Activated Sludge Process Control" sponsored and instructed by the NTOTC, the facility's compliance with effluent requirements improved from 61% to 90% of the time. Consider the cost savings resulting from a reduction in enforcement, compliance monitoring, and efforts expended to react to enforcement actions.

Support

The need for training is recognized and supported by all sectors of the country. The Water Pollution Control Federation (WPCF) in 1979 published the article "Operation and Maintenance of Water Pollution Control Facilities: A White Paper" which included forty references to the need for and recommendations for training. The National Office of NETA has received numerous copies of letters stating concern and support for training ranging from the Personnel Advancement Committee of the N.Y. WPCF to the "grass roots" membership of NETA.

Other national organizations such as the American Clean Water Association, the National Demonstration Water Project, the Association of Metropolitan Sewerage Agencies, the American Academy of Environmental Engineers, the National Academy of Sciences have expressed support for training and development of an environmental work force.

Recommendations

The NETA supports fiscal responsibility and reduction in federal spending, but opposes indiscriminate elimination of all environmental training programs. The Association advocates state self-sufficiency. The sudden and complete elimination of all federal support for environmental training however was too abrupt. A more orderly transition is necessary to enable states to prepare for this enormous responsibility. We must have a National Plan which clearly articulates the roles of the partnership involving governmental agencies at all levels (Federal, State & Local), and the owners of the treatment facilities. Demonstration projects and models must be combined with a survey of the state of the art of training in the states and assistance provided to facilitate development of individual state strategies which will gradually reduce federal assistance and increase local funding over a defined period of time to result in a state training program which is primarily self-sustaining.

In order to accomplish this the Sections of PL92500 which provide for training and which expired in September 1982 must be reauthorized. Congress must reauthorize Sections 104(g), 106, 109b, and 112 of PL92500 as the first step in demonstrating a commitment to environmental training.

Serious consideration should also be given to mandating training as has been done in the Resource Conservation and Recovery Act (RCRA) which mandates that an employer train employees handling toxic and hazardous wastes. Examples of this type of approach might include a requirement that an established percentage of a construction grant must be allocated to training. This concept is different than the present requirement that the engineering firm remain on-site and operate a newly constructed treatment facility for a prescribed period of time. Another approach is to require that a fixed percentage of the operating budget for the treatment facility be allocated to training. In some ways the owners and users of treatment facilities must be impressed with the necessity for developing and maintaining a competent operating staff.

The RCRA legislation does mandate the training of the industrial worker but no attention has been directed to the training of the state and local regulatory and monitoring staff. Federal resources are necessary to develop the capabilities for recognizing, identifying, and managing hazardous wastes.

Although precise levels of financial support are difficult to recommend without more indepth knowledge of budget details, the following allocations are recommended for consideration:

Section	Purpose	Amount	
PL94580	Regulatory Staff Training & Development	$2,000,000	Sub-Total
P192500			
104(g) (1)	Operator and Instructor Training	1,000,000	
104(g) (3) (A)	Professional (graduate) Training	600,000	
104(g) (3) (B)	Research Fellowships	500,000	
104(g) (3) (C)	Direct Training	750,000	
109-112	Undergraduate Training	650,000	
109-112	Curriculum Development		
	National Training and Development Technology Center (NTOTC)	1,000,000	
	Sub-Total B	$5,000,000	
Total Environmental Work Force Development (Sub-Total A&B)		$7,000,000	

As stated previously, the NETA is equally concerned with financial and technical assistance to the other areas of the environmental training. Congress is strongly encouraged to review the specific issues in this testimony and apply the concepts to the environmental training for drinking water, solid waste, toxic materials, and hazardous wastes, air quality, noise, etc.

The NETA is thankful for the opportunity to provide this testimony and respectfully request that Congress consider our concerns and assume a responsible position in developing a competent and qualified environmental work force.

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STATEMENT OF MRS. DEBORAH HORTON, DIRECTOR, ENVIRONMENTAL TECHNOLOGY, UTAH TECHNICAL COLLEGE AT PROVO, ON BEHALF OF THE NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

Senator GARN. Debra, we are happy to have you before us again this year.

Mrs. HORTON. Thank you. I appreciated the opportunity to be here this year and last year, as well.

This testimony is going to be presented on behalf of the Utah College of Provo and the National Environmental Training Association as it was last year. As a college in Utah, we are responsible for training both new operators in the field as well as those operators that have been around for a while. I found some new figures on the reasons for the high turnover of operators. Those two are low pay and the increase in physical facilties being built. A recent study shows that at least 50 percent of the treatment plants pay a salary either too low to retain their regular employees or to attract quality operators.

In addition to that, an estimate by EPA in a 1976 needs survey show that by the year 2000, there will be a 33-percent increase necessary in wastewater treatment plant operators and a 37-percent increase in collection system workers. So we are dealing with some fairly large numbers.

We train the new operators with an associate degree program. That program is in place and is operating at the present time. Many of our students are continuing operators, as well. In fact, the bulk of our operators at this point are already in the field and are going to get their associate degree.

The continuing operation of training works two ways. We provide workshops around the State. In the next 6 months, I think we have had 10 scheduled to train the operators. In addition to that, we are training in the plant at the small treatment plants around the State. This method of training has the most direct impact on the actual water quality, because you in-plant train them on their own machinery at their own treatment plant. This is being done in the 1014 fund from fiscal year 1982, and we have an instructor in the field who goes from town to town.

We have evaluated 13 plants and are going to deal with 8 of them, I believe with current funding, maybe 7 of them, depending on some of the problems that come up. One of our main goals is to be self-sufficient in the very near future. I think we are very near that goal at the present time.

We consider self-sufficienty to be defined in three different ways: For the associate degree program, we would expect that to be self-sufficient when it is totally supported by State funding. In addition to handling the associate degree program, state fundings secretaries expected to pay for the coordination of the entire program in Utah. At the local level, they pay for their own workshops, and the large plants would be expected to pay for their own in-plant training, because they have a tax base with a large enough kind of commitment. The third kind of self-sufficiency is for the small plants, the lagoon systems primarily around the State, that need the in-plant training and can't afford it.

We would consider our program self sufficient even if Federal funding is carrying the load on those small plants that can't afford to pay for their own in-plant training. In addition to that kind of fiscal commitment from the Federal government, there are four other commitments that I would like to see.

One of those is consistent—ongoing funding. It may be a fairly low level, but we need to know what is coming up so that we can plan our program based on what is available in the way of funding.

Second, we need national goals defined. Utah has defined goals through the Joint Training and Coordinating Committee, and we are working toward those, but we get conflicting reports at the Federal level. We need something to hang our hats on and say, from year to year, "This is the goal that we are heading to."

Third, I would like to see the Government annually reviewing and evaluating the programs out in the States. Are they doing what we think they are intended to do? Are they successful? Is there a need for a change of some kind in the way those programs are being directed?

Lastly, I would like to see a mandate to Congress as well as a follow-up that the funds that are earmarked for operator training are spent for that. I see too many times where ongoing programs are funded under the guise of something new and were just carrying on what has been going on before.

In summary, a 1982 Harris survey shows that 94 percent of the population supports the Clean Water Act in either its present form or a harsher form. Knowledgeable operations are a vital cog toward this goal of clean water. All three levels of government—local, State, and Federal—need to be involved in the funding of this project at the present time. It is not only desirable to fund section 104(g) of Public Law 92-500, but it is necessary if the national goal of clean, safe water is ultimately to be met.

Senator GARN. Thank you very much.

As you noted in your testimony, we expect to spend $600 million over the next 20 years just in Utah to expand and improve our treatment facilities. Nationwide, we have appropriated over $37 billion for EPA's wastewater construction program.

Given this kind of investment, it would be shortsighted to ignore the training requirements, as I discussed with you last year, of the plant operators. It makes no sense to put that kind of money into a program and then not have qualified operators.

So consequently, I have consistently added these funds to EPA's budget, and I am pleased to see that this training will be available, particularly for such growth areas as Emergy County and at the eight small plants that you mentioned. I would appreciate it if you could keep me informed on now you are coming along with those eight plants.

Mrs. HORTON. I certainly will.

Senator GARN. thank you very much.

Mrs. HORTON. Thank you.

[The statement follows:]

STATEMENT OF MRS. DEBORAH HORTON, DIRECTOR, ENVIRONMENTAL TECHNOLOGY, UTAH TECHNICAL COLLEGE AT PROVO, UTAH, ON BEHALF OF THE NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

This testimony is presented on behalf of Utah Technical College at Provo, Utah and the National Environmental Training Association. Both organizations are dedicated to the training of operators and managers in the environmental field in order to improve water quality, operations efficiency, cost efficiency and energy conservation.

The Environmental Technology building at Utah Technical College at Provo is Utah's State Wastewater Operators Training Facility and was funded through Section 109 (b) of P.L. 92-500.

As this hearing applies to the Clean Water Act (P.L. 92-500), the testimony will present data and support for federal supplementary funding for wastewater personnel training, although both organizations are also involved in air, culinary water, solid waste and hazardous waste training.

When Utah Technical College at Provo was designated the 109 (b) facility in Utah, the College assumed two major responsibilities: 1) Providing training for operators new to the wastewater field, and 2) providing training for operators with experience. The goal behind these responsibilities is to improve effluent quality of treatment plants in Utah.

NEW OPERATOR TRAINING

The first responsibility, to provide operators new to the wastewater field, is necessary for two reasons. First, turnover is extremely high. The major reason for this was isolated by Water Pollution Control Federation in "Special Report 1980 Salaries of Wastewater Personnel."

According to the report, "Personnel employed in water pollution control systems are paid less than other public service employees and less than persons with comparable job skills who are employed in the private sector." On an overall basis, the study reported, "A substantial number, perhaps as many as 50 percent of all wastewater treatment and collection systems, may pay salaries that are too low to attract and retain competent and well-qualified personnel to manage, operate and maintain the systems." This problem is especially noticeable in the smaller, more rural communities where the tax base is small and the one or two town employees are paid very litte. As a result, these operators are prone to leave the field to work in the private sector.

The second major reason why newly trained operators are in great demand is the estimate that by the year 2000, the workforce in wastewater treatment plants will need to be increased by 33 percent and in collection systems by 37 percent. These figures were derived utilizing the results of EPA's 1978 Needs Survey which reported estimates of the needed increases in new treatment plants and collection systems by the year 2000.

In Utah alone, it is estimated that in the next 20 years, $600 million will be expended to enlarge and improve wastewater treatment facilities. These figures are consistent with a workforce growth in Utah similar to the national estimate.

CONTINUING OPERATOR TRAINING

While the flow of new operators into the field is a necessity, it is also imperative that existing operators upgrade their skills. Hence the second responsibility of the College is training existing operators. This trend to continually train wastewater operators can be seen by observing the increasing numbers of operator certification boards which require additional training prior to the renewal of certificates. The wastewater field is dynamic, so the operators' knowledge cannot remain static and still result in optimum plant efficiency.

The College has instituted a workshop program to teach experienced operators new technology as it develops and how to operate and maintain equipment new to their plants as it is purchased. In addition, operators with a superficial knowledge of processes or equipment can gain a comprehension or application level of knowledge. This results in better job performance and high levels of motivation to do a good job.

The necessity to meet EPA mandated secondary treatment standards and rapidly increasing populations are additional reasons for continually training operators. Secondary treatment standards require a higher level of knowledge than primary treatment. The operator who has always operated a simple system, may well be asked to operate the secondary plant once it is constructed. The knowledge he has used in the past is not adequate for him to successfully accept the challenge of the new plant.

Similarly, when an area, such as Emery County, Utah, experiences a "boom" growth, the town quickly overloads the treatment plant, necessitating the construction of a larger one. As stated by the Utah Foundation in a 1982 report, "Utah's potential for energy resource development holds the threat of 'boom town' growth in many now-rural areas, and serious problems of waste disposal could quickly develop in many parts of the state." Therefore many operators in Utah and around the nation, face the problem of learning to operate a more sophisticated treatment plant and need to upgrade their knowledge in order to be successful. In addition, the operator must also maximize the operation of the overloaded plant while the new one is in design and construction.

According to Utah Department of Health officials, training for operators will improve the feasibility of meeting discharge limitations during rapid growth because a qualified operator can maximize the capability of the plant, and at times, even extend the design capacity.

IN PLANT TRAINING

Although the operators benefit from knowledge gained in a workshop setting, in-plant, one-on-one training is far more effective when trying to teach application level objectives to operators. When this is done correctly, it will have a positive impact on effluent quality, plant efficiency, cost effectiveness, and energy conservation. However, many times plant management institutes an in-plant training program without adequately planning and managing it. In this instance, the in-plant training is wasted.

A study conducted by the Personnel Advancement Committee of the Water Pollution Control Federation found that, "On-the-job training will continue to be the predominant mechanism for developing knowledge and skills in water pollution control operations technology even though the majority, at least 83 percent of all treatment and collection systems may not have an adequate on-the-job training program." In addition to the problem of trying to set up on-the-job training programs with inadequate instructional technology expertise, the majority of these programs that are devised by the treatment plant management, do not receive an adequate budget. In small, rural communities, in-plant programs are not feasible due to lack of local funding, lack of personnel, lack of training expertise, and in many cases, lack of technical expertise.

Utah Technical College at Provo is endeavoring to solve the in-plant training problem for many small rural communities through the 104 (g) (1) project, funded through a Congressional add-on to the EPA budget. In keeping with the findings of the Hegg study, this project is designed to train operators at their own plants how to apply theoretical knowledge to their own specific situation.

Thirteen small treatment plants in Utah have been evaluated to determine why the plants aren't operating as they were designed. All of these plants are either in violation of their discharge permits or are very close to that point. Of these thirteen plants, eight have been chosen for in-depth evaluation and subsequent in-plant training. The goal of this training is to improve plant operation, maintenance and effluent quality. Cost efficiency will also be considered. The four plants which were deleted from the program were deleted due to disinterest of the town officials and/or the operators. In-plant training will begin this month on the eight treatment plants.

The majority of these plants have three operators, extremely small tax bases, inadequate operation and maintenance expertise and schedules, and a desire to improve their plant efficiency and effluent quality. After an average in-plant training duration of six months, the operators will operate their plants on their own for roughly six months. Then a final evaluation will be done to determine how much difference the training made in effluent quality and overall plant performance.

With FY83 funds, the College will pick up one or two of the less interested plants, trying to motivate them to improve their plant performance and participate in the program. An additional committment will be made to evaluate additional plants. Regrettably, the level of funding does not allow for any large inroads into the problems at the various lagoon sites in Utah.

This kind of program can only be accomplished in-plant on a one-on-one basis. Workshops cannot teach the level of learning required to make this kind of an impact on the operation and maintenance of treatment plants. However, this is a costly process when compared to the cost of workshops and correspondence courses. These towns are small, rural communities, with tax bases that will not allow for a large training bill that a metropolitan area might be able to pay. The training is needed to improve the water quality of Utah and the downstream states. The federal government, historically funding projects that go beyond state boundaries, should logically be expected to fund this portion of the operator training program in Utah and other states.

UTAH TECHNICAL COLLEGE/PROVO EFFORTS

The College is attempting to become self-supporting, and in the next several years, this goal should be achieved. Training new operators is a part of the Associate of Applied Sciences degree program. Although funding from the state legislature is not available at this time for this program, it is anticipated that in the very near future the state legislature will provide adequate funds for the hiring of full-time instructors and the acquisition of necessary equipment and supplies.

In the effort to upgrade the knowledge and skill of current operators, the College administers workshops on varying topics on a statewide basis. These workshops are supported through fees paid by the students and their employers.

The third goal, to improve plant effluent quality, is being funded through FY82 funds from Section 104 (g) of P.L. 92-500.

For each of these three aspects of the total program, self-sufficiency is defind differently. Self-sufficiency will be achieved for the program as a whole when: 1) The Associate degree program is adequately state funded, 2) workshops are student and employer funded, and 3) technical assistance and on-site training at small plants is federally funded on a continuous basis.

NEED FOR CONGRESSIONAL AID

However, unless a national plan is developed for the continuation of operator training in the United States, progress in this area will be hindered.

Some of the necessary prerequisites for an adequate program include at the federal level:

1. Funding on an on-going basis so that programs may be planned. As stated earlier, the federal government has a legitimate role in wastewater operator training. In order for goals to be met, however, this funding must be consistent. A long range plan cannot be designed, implemented, and successfully completed without consistent funding.
2. A written and published plan of goals and milestones. When political view points swing left and right every four years or so, the national operator training objectives fribulate along the same curve. Long range target goals need to be set, published for the use of the trainers, and then adhered to, regardless of current political upheavals. Moving targets are nearly impossible to hit.

   Requirements for the training of industrial wastewater operators should be a part of this policy. In addition, 109 (b) centers should be seriously considered as primary vehicles for operator training.

3. An annual review and evaluation of the progams funded at the federal level. Questions such as: Was plant effluent quality improved due to this training? Is the training an integral part of the overall training plan at the local, state and federal levels? Did the training meet the stateed objectives? Quality control of any program is vital to its eventual success.
4. A mandate from Congress to spend operator training dollars on operator training. Staffing state agency compliance departments, training city officials, or staffing college associate degree programs are only a few possibilities for the expenditure of 104 (g) (1) dollars that would not result in trained operators. Once Congress has earmarked funds for operator training, the federal guidelines need to be written to meet the mandated goal.

CONCLUSION

In a 1982 Harris survey, it was shown that 94 percent of Americans support the Clean Water Act in its present form or in a stricter form. This same survey showed that a majority of the people were also amenable to an $100 per year or greater tax increase for safe, clean water.

The operators at the treatment plants are a vital cog in the effort to improve the nation's water quality. Local, state and federal governments are responsible for seeing that these operators have the knowledge and expertise necessary to maximize the operation of their treatment plants in order to improve plant effluent, and thereby, the quality of the waters of the United States. All three levels of government need to be involved in funding this effort.

It is not only desireable to fund Section 104 (g) of P.L. 92-500, but it is necessary if the national goal of clean, safe water is ultimately to be met.

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STATEMENT OF ROBERT HILBERT, GENERAL MANAGER, SALT LAKE COUNTY, UTAH, WATER CONSERVATION DISTRICT

ACCOMPANIED BY:

FOSTER BURBA, PRESIDENT, LOUISVILLE WATER CO.

EDWARD BLAKE, GENERAL MANAGER, CHAMPLAIN, VT., WATER DISTRICT

JIM MANLEERING, SUPERINTENDENT, NEW YORK'S WATER DEPARTMENT OF HEMSTEAD TOWN

Senator GARN. Next I would like to invite to the witness table Robert Hilbert, general manager of the Salt Lake County, Utah, Water Conservation District; Foster Burba, president of the Louisville Water Co.; Edward Blake, general manager of Lake Champlain, Vt., Water District; and Daniel Davis.

Mr. HILBERT. Good morning, Mr. Chairman. I appreciate the opportunity to appear before you.

I would like to introduce my guests and myself, if I may. I am Robert Hilbert of the Salt Lake City Water Conservancy District. With me today is Mr. Foster Burba. Foster is the president of the Louisville Water Co. and also chairman of the American Waterworks Association's Water Utility Council and trustee of the AWWA Research Foundation.

Also with me today is Mr. Edward Blake on the end of the table, the general manager of the Champlain Water District of Burlington, Vt. The other gentleman from New York was unable to be with us, but we had a staff member from the American Waterworks Association Research Foundation, Mr. Jim Manleering, who serves as executive director.

Mr. Chairman, we have several written statements we would like to make a part of the record, and they are with us today, and we will submit them for the Secretary, and maybe you will followup with Mr. Berger today or tomorrow.

Senator GARN. That will be included in the record.

Mr. HILBERT. I appreciate that, Mr. Chairman. This is the second time I have appeared before this committee. The first time was 2 years ago, testifying on behalf of the Environmental Protection Agency budget, and 2 years ago, the American Waterworks Association Research Foundation was very pleased at the language your committee developed in emphasizing the need for expanding the partnership between EPA and the water supply industry.

We were encouraged with what results might follow as a result of that committee report, but unfortunately, EPA has not followed through with their end of the bargain as far as the partnership is concerned.

In the last 2 years, AWWA Research Foundation has used moneys contributed by the water supply industry to the tune of $1 million to support 22 research programs. Some of those research programs were submitted to EPA in an attempt to get the assistance as outlined in your committee report, but we were unable to have any of those projects funded by EPA.

We are here today to request that an additional $1 million be added to EPA's water supply research program. We ask that this $1 million be set aside as a grant-in-aid for the AWWA Research Foundation.

We had hoped the language of 2 years ago would be sufficient to meet this test but, Mr. Chairman, we are frustrated that after appearing before you 2 years ago and having the committee take the time to include this language in your report, EPA has ignored that request. Now we need to request that explicit language be included in the committee report to see that EPA recognizes the needs of the water supply industry and support the $1 million that would act as seed money, with the American Waterworks Foundation putting up another $1 million, to expand that $1 million into $2 million, and in future years, that would grow to an amount considerably above that.

I know identifying this money separately troubles the committee. But we feel this would be a good move as far as the committee is concerned because the AWWA Research Foundation represents the water supply industry of the entire Nation; approximately 70 percent of the population of the country is represented through its membership in the American Waterworks Association.

As I mentioned, the $1 million we are requesting would act as seed money. The foundation is prepared to match that money through contributions from the water supply industry. This would give the partnership that your committee referred to 2 years ago an opportunity to expand and to grow with the $1 million from EPA and the $1 million from the AWWA Research Foundation.

Your House committee counterpart has heard testimony from the research foundation, and it is my understanding that they are considering to include the $1 million as part of their report. I would like to take just a minute or two and ask Mr. Foster Burba to make a few remarks, Mr. Chairman, and also Mr. Ed Blake, and we will shortly finish in our 5 minutes as allotted.

If I could have Mr. Foster Burba to spend a minute or two with you.

Senator GARN. Let us first place your prepared statement in the record at this point, after which we will hear from Mr. Burba.

[The statement follows:]

STATEMENT OF ROBERT HILBERT, GENERAL MANAGER, SALT LAKE CITY WATER CONSERVANCY DISTRICT

Mr. Chairman, I am Robert Hilbert, General Manager of the Salt Lake City Water Conservancy District and a past-president of the American Water Works Association. With me are Mr. Foster Burba, President of the Louisville Water Company, Chairman of AWWA's Water Utility Council and a Trustee of the AWWA Research Foundation; Mr. Edward E. Blake, General Manager of the Champlain Water District, South Burlington, VT; and Mr. Daniel Davis, Superintendent of the Hempstead Water Department, Long Island, New York.

We thank you, Mr. Chairman, for this opportunity to address the Committee as it considers the fiscal 1984 appropriation for the Environmental Protection Agency. Our particular interest is the Agency's drinking water research budget. The Administration has requested $11,908,000 for drinking water research and development. We believe this amount to be woefully inadequate. Double it and you would have roughly the amount appropriated for this purpose just two years ago. During those two years, drinking water issues have not been eliminated; the fact is, more questions have been raised. Only the immediate and simpler problems have been resolved, the more difficult issues remain.

EPA has already announced that it intends to propose new drinking water regulations this year for a number of volatile organic chemicals -- perhaps six or eight of them, with more tagged for further study. Just how promptly and thoroughly can they be studied with a reduced budget?

Recent investigations into the matter of toxic waste disposal raise the specter of new incidents of contamination of our ground waters. Local communities dependent upon ground water are often in no condition to cope with such problems; they are usually small and lack both expertise and resources. We are frequently asked whether or not there are appropriate treatment technologies available to local utilities serving, say, fewer than 2,500 people? Almost 90% of the water systems in the country are in that category, Mr. Chairman. Worse, there are about 40,000 water systems that serve fewer than 500 people. There are no cost-effective technologies available to these systems for the conventional contaminants (e.g. nitrate, barium and radioactivity) let alone for the organic contaminants of recent concern. Small systems can't even afford the analytical techniques currently available to monitor for the presence of suspect contaminants. The problem is complex, requiring new solutions and new ways of reaching those tens of thousands of small communities with new and practical approaches to their dilemma. That means research and an effective outreach program.

Cost is a problem that plagues even the large utilities. The escalating budgets of water utilities are directly proportional to the increase in labor costs, energy expenses, new regulatory requirements, analytical needs, etc. Yet it is very difficult to obtain the necessary rate increases in today's economic climate. Despite the justification, it appears that the pressure to limit utility rates will continue in the future. Research is the answer. Research may not eliminate the cost problem but it will certainly help control it.

Our surface waters have been found to contain hundreds, even thousands of chemical compounds. We know very little about the health effects of most of them. We know absolutely nothing about the health effects of consuming them in the exotic combinations in which they occur. That issue also calls for research. It is a matter of public health and traditionally, necessarily, public health research is a responsibility of the government.

The water industry, with all its engineers and chemists, is in no way capable or qualified to study health effects. But the industry and the public have a right to expect public health guidance that is thoroughly grounded in solid research, in scientifically reliable and believable data. If the government determines that consumption of minute quantities of a given chemical or a mixture of compounds presents an unreasonable risk to human health, the water utilities of this country will remove it. Our commitment to safe drinking water is second to no one's. My point is that the data must be sound in order to justify the cost to the industry and to the consumer that may be required for new treatment processes. That sort of confidence can not be obtained by the research budget proposed for EPA.

This hearing is not the proper forum in which to discuss in detail the specifics of the drinking water research agenda that ought to be undertaken by EPA. Permit me merely to suggest that that agenda includes at least six major research areas:

1. Health Effects. Here we need studies of numerous chemicals and their effects in combination. Work is needed on contaminants that may warrant regulation and on unregulated compounds for which health advisories are most important in localized situations. In addition, we urge research into improvements in the research methods themselves -- in the selection of species for animal tests, in epidemiological procedures, in the risk extrapolation models. This subject area is rife with uncertainties and controversy and merits extensive attention and investment.

2. Analytical Methods. Advances in the field of chemical analysis during the past decade have been dramatic. Now we know that even more refinements are required to ensure accuracy, reliability, and consistency. We also need inexpensive screening tests that can be used by utilities to determine whether or not the more costly analyses are really necessary. Work on analytical procedures and quality assurance programs should be continued by EPA, if not increased. No one else can fill that role.

3. Water Treatment Technology. Here we are in something of a Catch-22 situation. The marketplace is not going to invest in the development and installation of new technologies to control contaminants that may not have to be removed. Under the law, EPA cannot regulate new contaminants until it can establish the existence of generally available, cost-effective technologies. This means that investigations into the efficacy of currently available treatment processes in relation to new contaminants of concern must be conducted by the government. Development of modifications or new technologies is not likely to happen unless EPA takes the lead and works cooperatively with industry. Special mention should be made here of the need for R and D in the area of treatment technologies for very small systems -- inexpensive, easy to operate technologies appropriate for the tens of thousands of small communities whose water now receives little or no treatment.

4. Ground Water. The gamut of research topics here is extensive, ranging from the movement and fate of contaminants in subsurface environments to monitoring and predictive

techniques to hard technologies of control and removal. Until very recently, there was little concern about ground water contamination; consequently there was little research in that area. Now we're learning about the problems and about how impoverished is our knowledge base.

5. Water Quality. As in many fields, the more we learn about water, the more we encounter new questions needing answers. More work needs to be done on various disinfectants and their by-products, on the chemicals and materials used directly and indirectly in water treatment, on the water quality that results from the interaction of various waters and various kinds of distribution systems. Here again, we are talking about parameters of water quality that may have an effect on human health.

6. Finally, we can identify miscellaneous questions calling for serious research. There are economic issues of pollution and clean-up, of water rates and regulatory impacts. There are institutional and legal problems and solutions to be explored. There is a crying need for technology transfer, for the results of this research -- and fundamental data as well -- to be effectively communicated to those who need it.

All that we wish to establish at this point, Mr. Chairman, is that this is no time to cut back on drinking water research. Thanks in large part to the Safe Drinking Water Act, the public has been alerted to new and complex issues concerning its drinking water. Rightly, the consumer demands action and assurances concerning the quality and safety of his water. And for all that we have learned during the past decade -- and the advances have been truly great -- we are left with more unanswered questions than ever before. EPA's research agenda has grown under the Safe Drinking Water Act and in behalf of the industry and the public we urge the Congress to continue the support and the leadership that it has given this program.

More than that, we pledge the support of the water supply industry and express once again our willingness to work with the Agency on its research program. In that regard we have two suggestions. First, we believe it would be useful for EPA to provide mechanisms for industry representatives to participate in the planning of research programs, if only on an advisory basis. Industry involvement would help to ensure coordination and bring to bear the practical experience of managers, engineers and chemists at work in the field. Research priorities should be very carefully focused on the central needs of the program and the realities of implementing regulations at the local level. In the past, certain elements of the drinking water research program have not been convincingly relevant to the administration of the Act.

Secondly, we propose an action by the Congress that will greatly stimulate the industry's involvement in drinking water research. We request that the Committee consider an add-on of $1,000,000, in addition to whatever amount is appropriated for EPA's research program, to be ear-marked as a grant-in-aid to the American Water Works Association Research Foundation. Our organization and the utilities participating in projects to be funded under this award would match the federal amount, dollar for dollar, thus doubling the impact and value of the Congresssional appropriation.

Permit me to provide a word of background to our proposal. Two years ago this June the Directors of the American Water Works Association met to discuss the future of industry research and development. They decided that we faced three alternatives: (1) dump the problem in the lap of the federal government; (2) have each utility solve its own problems; or (3) adopt a program of utilities closing ranks with each other to create a centralized effort aimed at common industry problems. We chose the third option.

In the support of this decision, the AWWA Board of Directors voted to provide for organization and individual member fees in support of the Research Foundation. The response has been heartening. In little more than a year, industry contributions to the Research Foundation have increased four-fold. Cooperation and cost sharing with participating member water utilities has enabled us to expand a modest number of dollars into a significant research effort that inaugurated 22 new research projects during the last year....all of them of practical consequence to water utilities throughout the United States.

In the spring of 1981 representatives of the American Water Works Association Research Foundation also contacted this Subcommittee on the question of drinking water research and development funding. The result was language in your Fiscal Year 1982 Subcommittee Report and in the Conference report which called for increased cooperation between EPA and the water industry. The kinds of cooperative efforts described in the Congressional Committee reports have not been accomplished, Mr. Chairman. We understand that the drastic reductions which have taken place in the Agency's R & D budget may have made any meaningful cooperation impossible. Nevertheless, on our part, we have moved ahead and now stand ready to invest a substantial part of our Foundation's $800,000 operating and research budget as matching funds for the federal dollars awarded us. Additional substantial industry contributions will also be made by those utilities taking part in specific R & D projects.

What we are seeking is seed money -- funds for priority research projects identified by local communities, funds which will also serve to generate greater industry investment in research activities. The latter point is particularly important. In recent decades, most local water utilities have not had significant research budgets; in fact, research does not even appear as a line item in their books. This is explained in part by the preoccupation of water systems with expanding their service to meet growing population and industrial demands. It is also explained in part by the general public satisfaction with their water supply and the resistance of consumers to increases in their water rates. Now, water suppliers, and indeed consumers, are confronted by an array of new problems and concerns for which the old ways offer no solutions. The public must become persuaded of the need for research, of the practical value of research. Industry leaders are prepared to move in that direction and their support of the AWWA Research Foundation demonstrates their conviction. What we need now is some assistance in launching a research program that addresses problems common to many localities, thus proving the broad-scale value of a cooperative, centralized research program.

In the long run, Mr. Chairman, the effort we propose will most certainly decrease the nation's reliance on federal research dollars. Our industry can assume a much larger research role than it has at present, but city-fathers and consumers need to know and accept that. The lesson is well-established among electric power utilities and gas utilities, whose industry-supported research programs are vastly larger than ours. This Committee can help the water supply industry on the road to self-sufficiency and self-regulatory programs by providing this seed money as an add-on to EPA's research budget. The self-regulatory nature of the drinking water research programs in The Netherlands, West Germany and England are perfect examples of how this would work.

The Safe Drinking Water Act provided the impetus for improving our drinking water; the industy is now ready to become an active partner in its implementation. With the support of the Committee, the water supply industry, through its Research Foundation, can begin to respond to the challenges I've mentioned and collaborate with EPA on a more effective and beneficial program of drinking water research. We've got the expertise; we've got a delivery system that reaches throughout the country; and we've got the support of the industry. We need only the favorable response of the Committee.

I thank you, Mr. Chairman, for this opportunity to appear before you. If you or any other Member have any questions, my associates and I would be pleased to respond.

STATEMENT OF FOSTER BURBA

Senator GARN. Now, Mr. Burba, please go ahead.

Mr. BURBA. Mr. Chairman, as the director of the Committee Council on Water Utilities, we are very interested in practical research that would benefit, directly and rather quickly, this Nation's public water suppliers. As a trustee on the research foundation, I would help assure that that practicality would come into being.

Second, the research foundation is ready with commitments, money, and services, to help leverage this $1 million appropriation, if granted, into $2 million. Third, this would be seed money as an investment to help this Nation get into research, which is very much needed to demonstrate, if you will, what can be done for research so that, hopefully, we would become self-sufficient and expand this Nation's research and ultimately would result in less need for research by EPA or what have you.

Thank you.

Senator GARN. Thank you.

Mr. HILBERT. I just might stop here just a second, Mr. Chairman, and emphasize what Foster has pointed out: That the projects that would be identified for research are projects that the water supply industry would identify as real needs out in the real world. They would not be projects identified by EPA or regulatory agencies of the water supply industry, so there are projects out there, there are needs, and the water supply industry would identify those and move forward with the research that would be represented by the $2 million.

Mr. BLAKE. Mr. Chairman, we in northern New England are certainly comprised primarily of small water systems. We see this as an opportunity to involve small water systems operators in grassroots research and development. We feel that would have a fairly assured impact on the practicality of the research that is undertaken in the development of techniques that would apply directly to small water systems.

Thank you.

Senator GARN. Thank you very much.

I apologize that time has to be so brief for each of the witnesses, but we do appreciate very much the fact that you would come and testify. Thank you very much.

Mr. HILBERT. Thank you.

Mr. BURBA. Thank you, Mr. Chairman.

Mr. BLAKE. Thank you.

Senator GARN. Next, Mr. Pat DeJohn, Water and Wastewater Equipment Manufacturers Association.

STATEMENT OF PAT DeJOHN, WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION

Mr. DEJOHN. Mr. Chairman, members of the subcommittee, I am Pat DeJohn. I am with ICI Americas, Inc., Wilmington, Del., and I am a member of the Water and Wastewater Equipment Manufacturers Association, better known as WWEMA.

I am pleased to be here today to discuss the views of WWEMA concerning 1984 appropriations for the EPA construction grants program.

As you probably are aware, WWEMA is an association of over 130 major corporations that develop technology and manufacture and supply equipment, materials, and services to the wastewater industry. We provide equipment and systems which account for approximately 20 percent of the total dollars spent under the Clean Water Act's municipal construction grants program, and we provide an equal amount to industry.

The Clean Water Act encouraged our industry to allocate more resources to the water industry. We, suppliers of wastewater equipment and materials, invested in new and enlarged manufacturing facilities to meet the requirements of the act. Thus, new and more cost-effective technology has become available. In short, WWEMA members have responded to the desires of Congress in the best tradition of free enterprise.

Continued congressional leadership is essential if we are to reverse further deterioration of the clean water program. We certainly hope that the trend experienced by manufacturers, contractors, and consulting engineers, in having to reduce staff and redirect personnel because of the past uncertainty and instability of the program, can be reversed in the near future.

Specifically, WWEMA recommends the following: One, that Congress appropriate a minimum of $2.4 billion for the EPA construction grants program early in the 1984 budget process. According to the Congressional Budget Office study on public works infrastructure, April 1983, Federal spending to meet the needs as estimated by the EPA could be increased to $3.7 billion per year to reach a midpoint between meeting all needs and spending under currently authorized Federal ceiling.

Working toward an early budget commitment in 1983 for fiscal 1984 will put an end to uncertainty and instability and allow manufacturers to plan for the coming year.

No. 2, Congress is urged to direct the EPA to monitor the State-by-State analysis compiled by WWEMA—and we did attach a copy to our testimony—which indicates the number and dollar volume of construction grants projects that will go to bid in step 3 construction during 1983. This action is necessary to avoid further delays in the construction of the priority projects identified by each State. Only through this cooperative effort can we asssure an efficiently managed program which will result in a healthier economic climate in 1983 and beyond.

Three, Congress is urged to direct the EPA to mandate progress payments for specifically manufactured equipment in order to reduce costs and for manufacturers' economic viability. Suggested language for inclusion in EPA's procurement regulations has been attached to our statement for the record.

Our industry has found over the past several years that an EPA guidance memorandum encouraging the use of progress payments has not been effective. By mandating progress payments for undelivered specifically manufactured items of equipment in the EPA procurement regulations, EPA will reduce the cost of equipment to the grantee by reducing the interest component of equipment prices.

Second, it will achieve a leveling out of cash outlays for specific projects and for the program as a whole if progress payments are made.

Third, mandatory progress payments will encourage competition in the equipment field from small firms with minimal capitalization. WWEMA believes that with the Congress, EPA, and industry working together, we will be able to satisfy the needs of the Nation in the future with improved water quality at a price that is consistent with the benefits.

I would like to thank you and your members for allowing us to present our views today.

Senator GARN. Thank you very much. We appreciate your testimony. Not only have we made up the time, you have put us a little bit ahead, so we doubly thank you.

Mr. DEJOHN. Thank you.

[The statement follows:]

STATEMENT OF PAT DEJOHN ON BEHALF OF THE WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION, INC.

Mr. Chariman and members of the Subcommittee, I am Pat DeJohn of ICI Americas, Inc., Wilmington, Delaware, and a member of the Water and Wastewater Equipment Manufacturers Association, Inc. (hereinafter, WWEMA). I am pleased to be here today to discuss the views of WWEMA concerning 1984 appropriations for the EPA Construction Grants Program.

WWEMA is an association of over 130 major corporations that develop and manufacture technology, and supply equipment, materials and services to the water and wastewater industry. We provide equipment and systems which account for approximately 20 percent of the total dollars spent under the Clean Water Act's Municipal Construction Grants Program, and provide an equal amount to industry.

The Clean Water Act encouraged our industry to allocate more resources to the water industry. We, suppliers of wastewater equipment and materials, invested in new and enlarged manufacturing facilities to meet the requirements of the Act. Thus, new and more cost-effective technology has become available. In short, WWEMA members have responded in the best tradition of free enterprise to the desires of Congress.

Continued congressional leadership is essential if we are to reverse further deterioration of the Clean Water Program. We certainly hope that the trend experienced by manufacturers, contractors and consulting engineers, in having to reduce staff and redirect personnel because of past uncertainty and instability of the program, can be reversed in the near future.

Specifically, WWEMA recommends the following:

1. That Congress appropriate a minimum $2.4 billion for the EPA Construction Grants Program early in the 1984 budget process. According to the Congressional Budget Office study on "Public Works Infrastructure" (April 1983), federal spending, to meet the needs as estimated by the EPA, could be increased to $3.7 billion per year to reach a mid-point between meeting all needs and spending under currently authorized federal ceiling. Working toward an early budget commitment in 1983 for fiscal 1984 will put an end to uncertainty and instability and allow manufacturers to plan for the coming year.

2. Congress is urged to direct the EPA to monitor the "State-By-State Analysis" compiled by WWEMA (copy attached), which indicates the number and dollar volume of construction grants projects that will go to bid in Step 3 (construction) during 1983. This action is necessary to avoid further delays in the construction of the priority projects identified by each state. Only through this cooperative effort can we assure an efficiently-managed program which will result in a healthier economic climate in 1983 and beyond.

3. Congress is urged to direct the EPA to "mandate" progress payments for specifically manufactured equipment, for reduced costs and for manufacturers' economic viability. Suggested language for inclusion in EPA's Procurement Regulations has been attached to our statement for the record. Our industry has found over the past several years that an EPA guidance memorandum encouraging the use of progress payments has not been effective. By "mandating" progress payments for undelivered, specifically manufactured items of equipment in the EPA Procurement Regulations, EPA will reduce the cost of equipment to the grantee by reducing the interest component of equipment prices. Second, it will achieve a leveling out of cash outlays for specific projects and for the program as a whole if progress payments are made. Third, mandatory progress payments will encourage competition in the equipment field from small firms with minimal capitalization.

WWEMA believes that with the Congress, EPA and industry working together, we will be able to satisfy the needs of the nation in the future, with improved water quality at a price that is consistant with the benefits.

I would like to thank the Chairman and members for allowing WWEMA to present its views.

ATTACHMENT

Recommended Language on Progress Payments for EPA Procurement Regulations:

"(a) EPA policy is that grantees shall make prompt progress payments to prime contractors. Prime contractors shall also make prompt progress payments to subcontractors and suppliers for eligible construction, material, and equipment costs, including those of undelivered specifically manufactured equipment, incurred under a contract under an EPA construction grant.

(b) Payments for undelivered specifically manufactured items of equipment (excluding off-the-shelf or catalog items) shall be made as work on them progresses. Provisions for progress payments therefore shall be included in the bid and contract documents if all of the following conditions exist:

(i) The equipment is so designated in the project specifications;

(ii) The equipment to be specifically manufactured for the project could not be readily utilized on, nor diverted to, another job; and

(iii) A fabrication period of more than six (6) months is anticipated.

STATEMENT OF ROBERT J. JOHNSON, PRESIDENT (TENNESSEE), NORTH AMERICAN LAKE MANAGEMENT SOCIETY

Senator GARN. Mr. Robert J. Johnson, president of the North American Lake Management Society.

Mr. JOHNSON. Thank you, Mr. Chairman.

I am president of the Northern American Lake Management Society, and we very much appreciate the opportunity you have provided us today to speak on behalf of the Environmental Protection Agency's clean lakes program.

We prepared a longer statement that I have submitted for your consideration and publication in the record. It identifies the significance of current lake quality problems, concerns about the lack of nonpoint source pollution, control programs, and the need for specific research efforts. But during my brief few minutes before you, I will try to present our understanding of the status of the program and the serious consequences of dismantling it.

From 1975 to 1980, I worked for the Environmental Protection Agency, and I had the responsibility to develop and implement the program.

During my tenure, EPA was convinced that conventional production control requirements and practices embodied in the Clean Water Act were not sufficient to address adequately the deteriorating quality of this Nation's viable and extremely vital clean water sources.

I still hold these convictions today, and so do many people of the Nation today, as evidenced by polls on environmental concerns.

The North American Lake Management Society was formed in 1980 because many of these same people believed that a sustained national focus is necessary if we are to preserve our lake heritage for future generations.

The need was made more clear in the 1981 by the CEQ report on environmental trends when I noted that 85 percent of the Nation's lakes are degraded as a result of accelerated eutrophication and almost one-half of those problems cannot be solved without nonpoint source controls. Also, in a recent statement by Normal Bull, over 6 million tons of sediment grains from disturned land annually, much of it reaching and filling our lake resources at alarming rates.

In 1980, 8 years after the passage of the legislation that created it, EPA promulgated a regulation to implement and manage the clean lakes program. It was the first time that the States and general public got a clear signal from the Federal Government that they would assist them in a partnership to handle the very serious and complex Nation's water pollution problem.

The program published goals and guidelines that clearly showed that the program had grant assistance for 5 years and to get the State and local institutions into a position to handle this very serious problem.

In 1980, the clean lakes program had every attribute to make it one of the best Federal pollution control programs ever undertaken. It had little redtape, a small but effective staff, a quick turnaround with concrete results, a specific period of performance, and, most of all, a dedicated public commitment.

The State and local institutions came up with greater than 50 percent of the costs to implement this program. Also, the program is integrated well with other Federal and State programs to assist the project priorities setting, and so their costs could be kept low while pushing benefits to a maximum.

So where is the clean lakes program today? In 1981, 1 year after the program was implemented, the funding to finish the program was not sought by EPA. As directed by OMB, the entire EPA staff was disbanned, and use restrictions on appropriations which were greatly added by this subcommittee to EPA's budget in 1981 and 1983 were so restrictive that program completion became impossible, and the State and local governments are still staggering from these effects and their initial efforts have all but collapsed.

It represents a breach of faith in trust that the public placed in the partnership and the Federal Government in 1980 to help them address lake quality degredation problems, and now we are hear that some States, particularly Maine and Wisconsin, which were the stalwarts of lake management legislation in this country, are going to disband their own programs, following the signals from EPA.

If we are to be successful in developing programs to protect our national lake heritage, we believe what must happen now is a logical culmination of the program that was initiated in February 1980.

At that time it was estimated that an approximately $15 million annual appropriation for 5 years would complete it in a logical fashion. This would give States sufficient time to build their own legislative framework in which to carry out management, and there would be sufficient technical information developed from project guidelines to guide the States and local jurisdictions in properly addressing the quality problems in the future.

We do not believe that this is an unreasonable request when the resource we are trying to protect and enhance is worth billions of dollars, and we have every evidence that the Federal expenditure returns are greater than 8 to 1 in benefits and promotes the creation of jobs.

Eighty-seven percent of the expenditures is directed at construction of implementation of pollution control measures.

In closing these brief comments, I also wish to point out there is a critical need for EPA to reassign its staff to properly manage the clean lakes program. In 1980, a small staff of 20 nationally was found necessary to satisfactorily handle the $60 million for greater than 200 projects. Mostly, these projects are still active, yet they have no oversight. The technical information that should be obtained may never be available if this management practice continues, and we hope this subcommittee can help correct the situation, so once again the development of technical guidance on lake pollution and enhancement by EPA can continue.

Finally, as referenced in the written testimony, nonpoint source control programs need vigorous support by EPA through section 106 and other section 8 programs that EPA administers.

Thank you, very much, for this time.

Senator GARN. Thank you.

Are you recommending that a portion of section 196 water planning grants should be earmarked by Congress for the collection of the data on the water quality lakes?

If Congress restores the section 106 State grants program to around the fiscal year 1983 level, adding $30.2 million, do you think that we would have to direct the States to use the funds for this purpose? Is lake water quality a low issue at the State level?

Mr. JOHNSON. From what I understand, Mr. Chairman, EPA has issued an environmental management report this last year, and some of the information that we have seen from that indicates quite clearly that lake water quality is not a priority issue, for the States to need some encouragement.

Senator GARN. Thank you, very much.

We appreciate your testimony.

Mr. JOHNSON. Thank you, very much.

[The statement follows:]

STATEMENT OF ROBERT J. JOHNSON, PRESIDENT, NORTH AMERICAN LAKE MANAGEMENT SOCIETY

Mr. Chairman and Members of the Subcommittee:

My name is Robert J. Johnson and I am president of the North American Lake Management Society, a national organization made up of citizens, scientists, lake associations, and water pollution control professionals who are concerned about poor water quality in our Nation's lakes. The Society has testified before this subcommittee the last two years to support EPA's Clean Lakes Program, authorized by section 314 of the Clean Water Act. This year we are here not only to provide support for the program but also to apprise you of the lack of progress in cleaning up lake pollution. The lack of progress is the direct result of improper management of the program by EPA, along with the severe budget reductions to the program over the past two years. These budget and management problems are destroying the spirited local/State/Federal partnership that was the hallmark of the Clean Lakes Program, and a program quality that is essential to solve the serious lake pollution problems facing this country.

National Scope of Lake Pollution

A July 1981 report by the President's Council on Environmental Quality on environmental trends noted that 85 percent of the Nation's lakes have pollution problems related to accelerated eutrophication and almost half of those problems could not be remedied without nonpoint source controls. When you consider that the Clean Water Act was passed in 1972, the above statistic indicates that pollution problems in our Nation's lakes are not being properly addressed and in fact are probably getting worse. We don't know how much worse because many States are ignoring lakes in their water quality monitoring programs.

This year the Society has tried to participate with each EPA regional office to assess the significance of lake quality problems. The EPA offices did not want to participate with us--the public--and did not provide any assessment of lake quality problems to us. One exception was the Region IV office in Atlanta. Their summary of lake pollution problems is staggering. In seven Southeastern States, water quality problems were identified in 376 lakes and impoundments and nearly one half million acres of the lakes had use impairment from point and non-point pollution. The most frequent problems were fishkills, nuisance algal blooms, sedimentation, oxygen depletion, and weed infestations.

Lakes are susceptible to degradation from pollution because of their ability to capture pollutants and accumulate them within their water column, bottom sediments, and aquatic life. Some pollution control programs are cleaning up the water flowing into lakes and impoundments but in-place pollutants from decades of abuse still plague our lakes. There is direct evidence that some lakes have been poisoned by toxic materials and organic chemicals. The problem ranges from PCBs in Pine Bluff Lake, Arkansas; Fort Loudoun Lake, Tennessee; and Woods Pond, Massachusetts to mercury in High Rock Lake, North Carolina; and arsenic in Muskego Lake, Wisconsin as well as chemical contamination in Alycon Lake in New Jersey and in the Great Lakes. And let's not forget the devastating algal blooms plaguing lakes such as Deer Creek Reservoir in Utah or serious sedimentation problems such as those in Lake Wallenpaupack in Pennsylvania or Moon Lake and Wolf Lake in Mississippi.

These lake pollution problems are national problems, rather than just State or local problems. A lake receives pollutants from its entire watershed, which crosses local and State jurisdictions in many cases. In fact, almost 50 percent of our country's land area drains to a lake. Kentucky Lake on the Tennessee River receives pollutants from seven States, more than 100 counties, and hundreds of local jurisdictions. Only through basinwide, cost-effective controls of both point source and nonpoint source pollution involving local, State, and Federal cooperation can these pollution problems be solved. Elimination of the technical expertise available at the Federal level has crippled lake cleanup initiatives. Likewise funding cuts made in the section 314 Clean Lakes Program have crippled the effort to get States to take over lake restoration programs, which I will describe later.

The Clean Lakes Program

In our testimony before you last year, we described the beginning of the Clean Lakes Program in 1975 as a controversial demonstration program and how it struggled to fruition in 1980 with publication of regulations. We described how it focused on implementing lake restoration and lake protection practices rather than just studying problems. Over 87 percent of the total funding has been devoted to implementation, while 7 percent was spent on diagnostic-feasibility surveys. The program is a high-yield, low cost water quality improvement program that has been effective in getting local, State, and Federal interests to cooperate in solving specific water quality problems. The program is voluntary and must be initiated by local or State interest. The 50-50 matching grant nature of implementation projects ensures active participation by requiring local and/or State investment in the project. An EPA audit of the costs and benefits of the Clean Lakes Program found it to be one of the more cost effective government programs in existence. For every dollar expended by the Federal government, eight dollars in benefits were returned to the public. The restoration of urban lakes was most beneficial, with $9.64 of benefits in return for every dollar spent. In rural lakes the benefits were still $6.19 for every dollar spent.

Damage to Lake Restoration Initiatives

In the late 1970s, EPA achieved momentum in promoting local and State interest in lake quality improvement by demonstrating that it could be done. A milestone was reached in 1980 with the promulgation of regulations for the Clean Lakes Program. Through the enactment of section 314, Congress recognized that it was only through a local, State, and Federal partnership that the objectives of lake restoration and protection could be achieved, and EPA made the partnership part of the regulations. While Federal leadership, encouragement, and technical assistance is needed to see the projects through to completion, local involvement helps to tailor implementation approaches to what will be successful in the area, and the 50 percent matching fund requirement ensures that only good projects will be proposed. Unfortunately, this partnership has collapsed.

In 1981 there were no appropriations sought by the Administration to continue the Clean Lakes Program. The staff at EPA headquarters was disbanded, and the States were left holding the bag. It was a serious breach of faith and understanding with the States and with local interests. Congress contributed to the problem. In FY 1980, 20 million dollars in appropriations were made available to encourage this partnership for cleaning up lakes. By FY 1983, Congress reduced funding by 85 percent to only 3 million dollars. EPA staff told State agencies and local citizens interested in lake quality improvement that the Clean Lakes Program was dead. EPA technical staff were no longer available to provide assistance. Momentum to clean up lake pollution problems may soon be lost if this subcommittee does not recommend a substantial increase in funding for a multiyear period.

Already, progressive States that developed their own programs and capabilities in response to EPA's Clean Lakes Program have been adversely affected by the mixed signals sent by Congress and EPA the last three years. With State budget crises and the prospect that the Clean Lakes Program would be eliminated, many States have eliminated positions dealing with lake restoration and management. Only a very vocal outcry by citizens in Maine saved a scaled down program, and a similar effort to save the Wisconsin Lakes Program is now underway. Other States such as California, Iowa, Oklahoma, Arkansas, and South Dakota that were in the process of developing State programs have now backed away. If this Congress is at all concerned about water quality in our Nation's polluted lakes, it must act now. Restoration activity needed in lakes such as Deer Creek Reservoir (Utah), Lake Herman (South Dakota), Belmont Lake (New York), Wolf Lake (Mississippi), and Lake Wallenpaupack (Pennsylvania) will be delayed and will cost much more for future generations to address, if they are able to to do it at all.

Damage to lake restoration initiatives fostered during the 1970s is being caused not only by reductions in appropriations for section 314 but also through improper management by EPA of essential program evaluation efforts, research activities, public participation, and programs to control point and nonpoint sources of pollution. In 1980, EPA established a computer information system for tracking essential information (both technical and nontechnical) on section 314 projects. This was to be used in program evaluations to determine progress in lake restoration, to assist in public participation, and to be used in technology transfer to solve similar problems in other lakes. Little data has been entered into the system and this makes us suspect that little data has been requested from lake restoration projects by EPA as required in the Code of Federal Regulations (40 CFR Part 35.1600). No person is assigned the responsibility to develop and track this essential management tool. Consequently, we don't know how successful current projects are in lake restoration and it may be that this lack of EPA management is resulting in low returns on Congressional appropriations.

EPA's Office of Research and Development has spent almost three million dollars on an evaluation of effectiveness of lake quality improvement techniques. A guidance manual was to be developed based on this evaluation from funding appropriated under section 104(h) of the Clean Water Act. The project was never completed and we believe it is essential to guide future State and local efforts to improve lake quality. Along with this specific instance, EPA is not seeking appropriations for research to improve lake protection techniques and to demonstrate their utility. EPA has eliminated many public participation programs that are essential for convincing the public that good water quality can be restored to our Nation's lakes and has eliminated the State/EPA agreement process that is instrumental in establishing commitments for cleaning up lakes. In addition, EPA has not sought appropriations for nonpoint source control programs that are desperately needed to restore and protect lake quality. The cumulative results of this reduction in effort and lack of emphasis on essential programs to protect lakes is a lack of faith in EPA and its overseer, the Congress, and their commitment to clean water.

State Agency Survey - Can the States Take Over?

In 1982, the Society sent a questionnaire to State agencies that have participated in the Clean Lakes Program to determine what the impact of reduced funding for Section 314 would mean to them and whether their States could assume lake restoration and protection responsibilities. We received responses from across the country, from Connecticut to California and North Dakota to Arizona. The States were adamant that failure to fund the 314 program would cripple their fledgling lake quality management efforts and that it would break faith with those communities and States that invested in surveys and public participation to satisfy requirements of the 314 program. Here is a sample of what the States said:

Connecticut:	". . . staff will probably be reassigned to other functions, unrelated to lakes - loss of a valuable human resource. Implementation of recommendations from six phase I studies will be difficult, or impossible."
Louisiana:	"Considering the increased incidence of reported lake degradation, a discontinuation of Clean Lakes funding, would severely limit the state."
California:	"We have identified 186 lakes which are in need of restoration. It is likely that there will be difficulty completing the two restoration projects actually started without further Federal funding."
Iowa:	"Prior to the Clean Lakes Program . . . improvement and restoration of public lakes in Iowa received little attention. Lack of federal assistance will severely jeopardize Iowa's ability to improve and restore the quality of public lakes."

The states indicated for the most part that they are willing to accept a delegation of the Clean Lakes Program from EPA if some funding is provided. They are not at present prepared or willing to take over the sole responsibility of public lake protection, management, and restoration at this time. Only a handful of States have State matching grant programs to assist local communities in lake quality management. States want to participate but they need time to sell the program to their legislative bodies. Level funding for the 314 program for the next five years, Federal guidance in establishing State programs and in providing technical assistance, and Federal oversight are needed to encourage embryonic State programs to get off the ground and to accept lake quality management responsibilities.

NALMS Recommendations

The American people have not wavered in their concern and dedication for achieving clean water. The recent Harris poll showed that your constituents are deeply concerned about the lack of progress in cleaning up our Nation's waters. Almost unanimously, the public viewed pollution of rivers and lakes by sewage discharges and by industry as being a serious national problem. Almost half of respondents believed that lakes, streams, and rivers are more polluted now than 10 years ago. And astonishingly, 70 percent of the citizens said they would pay $100 more each year in taxes and higher prices to obtain cleaner water. This is about a 100 percent increase over per capita estimates for water pollution control on an annual basis. Over the last three years, Congress and EPA have drastically reduced water quality improvement programs. The EPA Clean Lakes Program has been cut for FY 1983 by 85 percent over funds available in FY 1980. While only 3 million dollars were appropriated, more than 45 requests totalling 14 million dollars were received by EPA for section 314 restoration funds in FY 1983. The North American Lake Management Society hopes that this subcommittee will reverse this decline in water quality improvement programs with your FY 1984 appropriations.

Last year, the Society recommended that this subcommittee appropriate 15 million dollars a year for five years for the EPA Clean Lakes Program. This year, we recommend the same appropriation with the stipulation that EPA reestablish a small staff (five people in EPA headquarters and one in each EPA regional office) to administer the program and assure that the funding is spent in a cost effective manner. Currently, $80 million in past year appropriations for grants are not being properly managed. Over a five year period, this would allow EPA to achieve about one-half of its 1981 program strategy goal for section 314: "to restore or protect a lake within 25 miles of the 280 major population centers" in the U.S. It would also give time to complete transfer of lake restoration programs and responsibilities to state governments.

The Society also recommends that $10 million be appropriated for section 104(h) to complete the lake restoration procedures guidance manual by 1988 and to support research into use of nonpoint source controls to protect lake water quality.

In anticipation of a National Commission on Water Quality being reestablished to examine progress made in water quality improvement under the Clean Water Act, a portion of section 106 funding to States should be earmarked to collect data on the water quality status of lakes that were surveyed in the National Eutrophication Survey of the early 1970s but that have not been recently evaluated. For those lakes that have recent water quality data available, the funding will be used to analyze the data, compare it with past data to determine trends, and to assemble this information for the public and Congress in the next 305(b) Report to Congress.

The Society recommends specific funding be earmarked to States under section 106 to establish nonpoint source control programs in watersheds known to have these water quality problems. Congress and EPA have recently avoided the issue of controlling nonpoint sources, and the time is appropriate for beginning a program to target attention to watersheds with priority nonpoint source problem areas.

Summary

Our Nation's lakes have suffered terribly from pollution and at least one-third are degraded--and many more are now deteriorating. While rivers can recover from past pollution by flushing pollutants downstream, lakes accumulate these pollutants and continue to have problems after the pollution source is controlled. We often forget that restoration and protection of good lake quality means jobs and income to millions of people in this country. Americans clearly want and deserve clean lakes and reservoirs for safe drinking water, recreation, industrial use, and aesthetic enjoyment. More than half of our Nation's population lives within five miles of a publicly owned lake! The North American Lake Management Society urges this subcommittee to provide modest level appropriations for the section 314 program, for section 104(h) research investigations, and for section 106 funding to States to assemble trend data on lake quality and to initiate programs in targeted watersheds for controlling priority nonpoint source water quality problems.

STATEMENT OF RICHARD B. GLAZER, CHAIRMAN, DIVISION OF BUSINESS AND HUMAN RESOURCES, ULSTER COUNTY (NEW YORK) COMMUNITY COLLEGE, ON BEHALF OF NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

Senator GARN. Next, if we could have Richard B. Glazer, chairman of the division of business and human resources, Ulster County Community College of New York, on behalf of the National Environmental Training Association.

Mr. Glazer, please proceed.

Mr. GLAZER. Thank you, Mr. Chairman.

It is a pleasure to be here today, and I wish to thank the members of the committee for providing me the opportunity to address them.

Over the past years, you have generously and wisely supported academic and technical training within the U.S. Environmental Protection Agency. This training has led to the formation of environmental work force which has become essential to the continuation of our pollution control programs and to assure the proper operation and maintenance of our water and wastewater treatment plants.

Unfortunately, the present administration has seen fit to strip the Environmental Protection Agency of its most effective and responsive programs. It has completely eliminated the national training operation and technology center; disregarded the training provisions of Public Law 92-500; attempted to block Federal support of the 109(b) State training centers, technical assistance projects to the States, and the training of the technical work force to enforce the national pollution discharge elimination system.

This policy of deliberate neglect has paralyzed our national pollution control programs and thrown the good intentions of Congress into disrepute and confusion.

Further, it is essential that undergraduate and graduate programs for training treatment plant operators, laboratory technicians and technologists, environmental and sanitary engineers, hazardous waste management specialists, and scientists be supported.

This support should be on both the institutional and student level. It should be earmarked for the development of new programs and curricula teams to meet the training needs for our rapidly changing technology.

It should include the use of microcomputers in the pollution control field, the use of microcomputers as training tools in emerging innovative and alternative technologies.

Over the past years, the training of technicians, technologists, engineers, and scientists in the pollution control field have been consistently ignored with disastrous results. We have now reached the point where, because of the lack of a training environmental work force, we can no longer properly analyze our septic, hazardous, and toxic wastes; control the transportation of this waste, and manage the safe storage or disposal of them.

Our treatment plants are still based on designs of the early 1890's. We are treating drinking water the same way we did at the turn of the century. And we have little, if any, idea of how to continue to meet the growing need for water resources of our Southwestern States, our Southern States, or the Midwest.

Additionally, if we are ever to develop the 2 trillion equivalent barrels of shale oil in the United States—1.8 trillion barrels which are in Colorado, Wyoming, and Utah—we must be able to control and minimize the major air, water, and solid waste health impacts.

Under the present administration's EPA policy of zero funding for training this essential work force, we must face the inescapable conclusion that we will never be able to meet this challenge and that the economic, social, and political impact will have a profound effect on our ability to function as a viable competitive nation.

In fact, we are faced with a double-barreled dilemma. The National Science Foundation Science Education Director has been completely eliminated. There is no money to aid in the education of scientists, researchers, technologists, or technicians and to keep the United States competitive on an international basis.

I, therefore, wish to recommend the following to the Senate: That $5 million be added to the fiscal year 1984 EPA budget for academic training; that this money be categorized as recommended in the amended budget for professional graduate training, undergraduate training, research fellowships, direct training, curriculum development, operator and instructor training, and the reinstitution of the National Training Operation and Technology Center within the EPA.

That, to keep EPA from frivolously and arbitrarily spending these funds and to assure that they are channeled to support the continued training of an environmental work force, the following statement will be placed into the fiscal year 1984 EPA budget: "The Environmental Protection Agency, under training grants and contracts, sections 109, 110, 111, and 112, and 104(g) (1)(3) (A), (B), and (C), will receive $4 billion to support training research and development and $1 million to reinstate the National Training Operation and Technology Center."

That funding be reinstated for the Operational and Technology Center so it can once again serve as a focal point for the coordination of training, program development, and particularly assistance to State and local governments.

When we consider that well over $30 billion has been spent on waste treatment systems and facilities construction and polllution control programs, this $5 million is a minimum amount of money to continue to assure the upgrading and worth of these programs and facilities.

I wish, again, to thank this committee for their graciousness and support, and particularly Senator Garn for having the foresight to recognize how essential these programs are to the well-being of all of our people.

Senator GARN. Thank you.

As you know, the subcommittee has supported these programs in the past. For a request for $5 million increase for academic training, curriculum, and so on, what type of curriculum development do you have in mind?

Mr. GLAZER. There have been a number of curriculum developments. There have been basically manuals which have been used only on a nationwide basis. There are radiovision materials. There are uses of computers. We have plenty developing in Ulster County a software program which is a training program that would have national impact in which it would allow the trainers to actually dial into essential areas and be able to answer questions; if they are wrong, be able to find out where these answers are, or to be answered directly, and they are to be given that information which they need for certification, for upgrading, or for training when new technologies come along as they are coming.

I think these are the types of things that are really so badly needed.

We tend to train people much as we have in the past, years and years ago. I think that as we get into the new technologies, we use new types of airplanes. I think we have to begin to use those new types of things that have come along in education and to make them available to all of our people, particularly in wastewater treatment.

The wastewater field has a diversity of types of individuals, some people that have a minimal education background, some with a very vast education background.

We have to be able to meet all of their needs and to train them. I think what happens in our waste treatment plants, what happens in our water treatment plants, what happens in our hazardous waste programs to a very great extent depends on what we do in training of this type in the future.

Senator GARN. Thank you, very much, Mr. Glazer.

Mr. GLAZER. Thank you, sir.

[The statement follows:]

STATEMENT OF RICHARD B. GLAZER REPRESENTING THE PROFESSIONAL COMMUNITY CONCERNED WITH ENVIRONMENTAL WORK FORCE TRAINING AND THE NATIONAL ENVIRONMENTAL TRAINING ASSOCIATION

It is a pleasure to be here today and I wish to thank the members of the committee for providing me the opportunity to address them.

Over the past years, you have generously and wisely supported academic and technical training within the United States Environmental Protection Agency. This training has led to the formation of an environmental work force which has become essential to the continuance of our pollution control programs and to assure the proper operation and maintenance of our water and wastewater treatment plants.

Because of the effectiveness of these programs they have garnered the support of the National Academy of Sciences, the American Academy of Environmental Engineers, the National Environmental Training Association, the Water Pollution Control Federation, the American Water Works Association and the Congress.

Unfortunately, the present administration has seen fit to strip the Environmental Protection Agency of its most effective and responsive programs. It has completely eliminated the National Training Operation and Technology Center, disregarded the training provisions of PL 92-500, attempted to block federal support of the 109(b) State Training Centers, technical assistance projects to the states and the training of a technical work force to enforce the National Pollution Discharge Elimination System (NPDES).

This policy of deliberate neglect has paralyzed our national pollution control programs and thrown the good intentions of Congress into disrepute and confusion.

Further, it is essential that undergraduate and graduate programs for training treatment plant operators, laboratory technicians and technologists, Environmental and Sanitary Engineers, hazardous waste management specialists and scientists be supported. This support should be on both the institutional and student level. It should be earmarked for the development of new programs and curriculum materials to meet the training needs of our rapidly changing technology. It should include the use of microcomputers in the pollution control field, the use of microcomputers as training tools and emerging innovative and alternative technologies.

Over the past years, the training of technicians, technologists, engineers and scientists in the pollution control fields, have been consistently ignored with disastrous results. We have now reached the point where, because of the lack of a trained environmental work force, we can no longer properly analyze our septic, hazardous and toxic waste, control the transportation of this waste, and manage the safe storage or disposal of them. Our treatment plants are still based on designs of the early 1900s, we are treating drinking water the same way we did at the turn of the century and we have little, if any, idea of how to continue to meet the growing need for water resources of our Southwestern states, our Southeastern states or the Midwest.

Additionally, if we are ever to develop the 2 trillion equivelent barrels of shale oil in the United States, 1.8 trillion barrels which are in Colorado, Wyoming, and Utah, we must be able to control and minimize the major air, water and solid waste health impacts.

Under the present administration -- EPA policy of zero funding for training this essential work force, we must face the inescapable conclusion that we will never be able to meet this challenge and that the economic, social and political impact will have a profound affect on our ability to function as a viable, competitive nation.

I therefore wish to recommend the following to Congress.

1. That $5 million be added to the FY 1984 EPA budget for academic training. That this money be catergorized as recommended in the appended budget for professional graduate training, undergraduate training, research fellowships, direct training, curriculum development, operator and instructor training, and the reinstitution of the National Training Operation and Technology Center within the EPA.

2. That, to keep EPA from frivolously and arbitrarily spending these funds, and to assure that they are channeled to support the continued training of an environmental work force the following statement be placed into the FY 1984 EPA budget.

   "The Environmental Protection Agency, under Training Grants and Contracts, Sections 109, 110, 111, and 112; and 104(g),(1),(3),(A,B and C), will receive $4 million to support training, research and curriculum development and $1 million to reinstitute the National Training Operation and Technology Center."

3. That funding be reinstated for the National Operational and Technology Center so it can, once again, serve as a focal point for the coordination of training, program development and technical assistance to state and local governments.

When we consider that well over $30 billion has been spent on waste treatment systems and facilities construction and pollution control programs, this $5 million is a minimal amount of monies to continue to assure the upgrading and worth of these programs.

I wish again to thank this committee for their graciousness, and support and Senator Garn for having the foresight to recognize how essential these programs are to the well being of all of our people.

PROPOSED FY 1984 BUDGET--EPA ACADEMIC TRAINING (PL 92-500
WATER POLLUTION CONTROL

Section	Purpose	Amount
104 (g)(3)(A)	Professional (graduate) Training	$1,000,000
104 (g)(3)(B)	Research Fellowships	1,000,000
104 (g)(3)(C)	Direct Training	500,000
109-112	Undergraduate Training	1,000,000
109-112	Curriculum Development	200,000
104 (g)(1)	Operator and Instructor Training	300,000
	National Training Operation & Technology Center	1,000,000
		$5,000,000

STATEMENT OF CHARLES BOOTHBY, EXECUTIVE SECRETARY, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

Senator GARN. The next witness is Mr. Charles Boothby, executive secretary, the National Association of Conservation Districts.

Mr. BOOTHBY. Thank you, very much, Mr. Chairman.

I am Charles Boothby, executive secretary of NACD. Our association represents the nearly 3,000 soil and water conservation districts and their State associations in the 50 States, Puerto Rico, the Virgin Islands, and very recently, the District of Columbia.

The conservation districts, in addition to providing services to cooperating landowners on erosion and sediment control activities, have been very much involved with other local agencies in the preparation and implementation of plans for the control of nonpoint sources of pollution.

In a majority of States, the conservation districts and State soil conservation agencies have been delegated responsibility for implementing the agricultural pollution control activities identified through the section 208 planning process. I have a very brief statement which I will not read, but I would like to add a few thoughts parenthetically.

First, we would like to associate ourselves with the testimony of the North American Lake Management Society relative to the clean lakes program which was presented earlier this morning.

Also, I wanted to bring to your attention an addendum which we have added to our testimony which is a publication on conservation tillage. That is, demonstrations in the Lake Erie basin, which have been going on for the last 2 years and were expanded this year quite substantially.

One of the things that we are finding with conservation tillage is we are not only reducing the amount of soil erosion on crop land, but we are also finding that the amount of herbicides, pesticides, and other agricultural chemicals can, perhaps, actually be reduced over conventional tillage methods by using various conservation tillage programs.

I think this is a substantial step forward in the technology of agriculture which has come about as a direct result of some of the water quality concerns in the Lake Erie basin.

With that Mr. Chairman, I would close my prepared remarks and be ready to answer any questions you may have.

Senator GARN. Thank you, very much.

You are recommending $12 million for the clean lakes program, and as you are undoubtedly aware, this program has not been reauthorized.

How did you arrive at the $12 million figure?

Mr. BOOTHBY. Basically, from the amount of interest that our conservation districts have, and our districts have been very much involved in the clean lakes program with the water quality management agencies in various States.

I personally worked with several clean lakes projects in the State of Main in the years past, and the interest is there; our indications are that there are clean lakes projects around, over the country, which this $12 million would only begin to satisfy.

Senator GARN. Thank you, very much.

We appreciate you being here. You are the last witness in the morning session.

Without objection, your prepared statement will be inserted in the hearing record at this point.

[The statement follows:]

STATEMENT OF CHARLES L. BOOTHBY, EXECUTIVE SECRETARY, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

AGENCY AND PROGRAM	FY 83 Appropriations	FY 84 Budget	NACD Recommendation
ENVIRONMENTAL PROTECTION AGENCY			
Water Quality Mgt. Planning (205j)	24,000,000	24,000,000	24,000,000
Clean Lakes Program(314)	3,000,000	-0-	12,000,000
State Program Grants(106)	54,200,000	24,000,000	55,000,000
Great Lakes Program(108(a))	4,813,500	3,697,300	5,000,000

Mr. Chairman, members of the Committee:

I am Charles L. Boothby, Executive Secretary, National Association of Conservation Districts (NACD). Our association represents the nearly 3000 soil and water conservation districts and their state associations in the 50 states, Puerto Rico, the Virgin Islands and the District of Columbia. Conservation districts, in addition to providing services to cooperating landowners on erosion and sediment control activities, have been very much involved with other local agencies in the preparation and implementation of plans for the control of non-point sources of pollution. In a majority of states, conservation districts and state soil conservation agencies have been delegated responsibility for implementing the agricultural pollution control activities identified through the Section 208 planning process.

The Clean Water Act of 1977, PL 95-217, added Section 208(j) for implementation of water quality control plans on individual farms and ranches. However, this provision has never been funded by Congress. Absent funding of 208(j), conservation districts have sought other sources of assistance through other provisions of the law to meet specific needs. The Clean Lakes Program (Section 314) has proven to be helpful in the control of non-point sources upstream of inland lakes in many areas. Portions of the State Program Grants under Section 106 have been used for specific planning on non-point controls.

The Great Lakes Program is being used successfully to promote the adoption of conservation tillage in the Lake Erie Basin. Through a grant to 19 conservation districts in three states last year, over 11,000 acres of demonstration plots have been established by local farmers comparing conservation tillage to conventional tillage. In 1983, the program has been expanded to 31 counties and it is anticipated that conservation tillage will be adopted on a much larger acreage.

I have enclosed a copy of a recently printed brochure which describes some of the work being done under this program in the Lake Erie Basin. I think you will find it of interest.

Mr. Chairman, the planning for the control of non-point source pollution is virtually complete in most areas of the country. Now is the time to assist localities in the implementation of these plans before the plans become obsolete.

Thank you for this opportunity to present the views of our association.

LAKE ERIE CONSERVATION TILLAGE DEMONSTRATIONS SPONSORED BY GREAT LAKES NATIONAL PROGRAM OFFICE, EPA, IN COOPERATION WITH THE NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS

Tillage:

The Western Basin of Lake Erie, made up of the basins of the Maumee, Sandusky, and Portage Rivers, has been identified as a source of phosphorus which is contributing to the eutrophication of the lake.

One way to control these phosphorus loadings to the lake is through the use of conservation tillage in areas where it is suitable.

In the 20,000 square mile American Lake Erie Watershed, 80 percent of the farmland has been identified as suitable for some kind of conservation tillage, and 53 percent of the land has been identified as suitable for no-till operations.

With the addition of new counties in 1983, the Tri-State Tillage Project being conducted by soil and water conservation districts, under the coordination of the National Association of Conservation Districts, for the Great Lakes National Program Office of the U.S. Environmental Protection Agency, will have conservation tillage demonstration programs underway in all of the counties of the Western Basin.

Participating soil and water conservation districts in Indiana and Michigan, as well as Allen and Defiance Counties in Ohio, have received direct grants from EPA. The Ohio Department of Natural Resources—Division of Soil and Water Districts received a grant for the balance of the Ohio districts and has subcontracted with each district to carry out the projects under their leadership.

The primary objective of these projects is to provide farmers interested in participating the use of no-till and ridge-till planting equipment for conducting 10-20 acre demonstration plots on their farms. In addition, the farmers are provided technical assistance they need to maximize their opportunity for successful demonstration plots. This includes soil conservation planning assistance from the Soil Conservation Service to select good sites for the demonstration plots. In addition, the Cooperative Extension Service in the participating states have provided professional help in designing nutrient and pest management programs. The districts also hope to provide them "hands on" assistance in setting up and using the new equipment. In addition, in some counties the Agricultural Stabilization and Conservation Service is providing cost sharing incentives under their agricultural conservation program to participating farmers. The goal is 20-40 farmers per district to carry out three year demonstration projects on their farms using either no-till or ridge-till system.

The National Association of Conservation Districts (NACD) has agreed to assist EPA in the coordination of these projects in the three states so that meaningful information can be gained and shared among the districts, agencies, and the farmers. As a result of these projects, it is hoped there will be increased adoption of no-till and ridge-till by farmers in areas where adaptable. This should lead to reduced phosphorus transport to Lake Erie and improved water quality.

The recently established Conservation Tillage Information Center, with a Field Office in Fort Wayne, Indiana, will serve as a vehicle for disseminating this information to other areas where it can be used to solve similar water quality or land management problems.

CONSERVING?

USING?

WASTING?

CONSERVATION TILLAGE

For the purpose of the Tri-State Tillage Projects, Conservation Tillage has been defined as those methods of farming that maintain adequate plant cover on the land to conserve soil and water. Conservation tillage systems reduce labor, energy, and capital requirements and will enhance the economic vitality of American agriculture.

EPA:

WATER QUALITY

Of all the Great Lakes, Erie is the most threatened by eutrophication arising from man's activities in the drainage basin. The U.S. Environmental Protection Agency, whose mission includes the protection of threatened water resources, has been concerned with the problems of Lake Erie since the agency's founding nearly a decade and a half ago.

The key to Lake Erie's eutrophication is phosphorus which enters the Lake from point source discharges, from the atmosphere, and from soil particles which have eroded from cropland. The higher levels of phosphorus result in the excessive growth of phytoplankton. Through a complex chain of events involving plant growth, die-off, and bacterial decomposition, the oxygen level in the lake is reduced. This stresses fish and other aquatic life. The critical oxygen depletion rate in Lake Erie's central basin has been exceeded every year since 1960.

INTERNATIONAL OBLIGATION TO GREAT LAKES

Improving the quality of Lake Erie is sound environmental policy, but United States concern with the Lake is reinforced by obligation imposed in a mutual agreement with the Canadian Government.

Among other objectives, the agreement (as modified in 1978) set a total phosphorus loading objective of 11,000 metric tons per year for Lake Erie.

Meeting the obligation imposed by that agreement will require that diffuse sources of phosphorus be controlled. In fact, it has been estimated that as much as half of the reduction called for in the Great Lakes Water Quality Agreement of 1978 can be achieved by reduction of phosphorus loss from agricultural land.

Conservation tillage practices are considered the most cost effective method for controlling nonpoint source pollution from rural land.

If a reduction in phosphorus loads is met, as called for in the U.S.-Canada agreement, the area of the lake where oxygen depletion is a problem could be reduced by 90 percent in just a few years.

WHY ARE THEY INTERESTED?

COOPERATION WITH AGRICULTURE

The Association of the Environmental Protection Agency and agriculture in the Great Lakes Region has been a beneficial one for both over the past decade.

Through Region V, headquartered at Chicago and the Great Lakes National Program Office, many programs and projects have been conducted. The Tri-State Tillage Project is the latest example.

EPA interest in agriculture stems from the Lake Erie Enforcement Conference of 1968. During that conference, agricultural activities were identified as a potential source of phosphorus to the lake.

The thrust of EPA actions to deal with possible agricultural pollution has been aimed at finding ways to reduce the phosphorus load entering the Lake, while not imposing a crushing burden on agriculture.

The decision to fund 31 districts in the Western Basin of Lake Erie in a program to accelerate the adoption of conservation tillage, is the result of nearly a decade of studies in which the agency supported local soil and water conservation districts and others who sought answers to the problem.

In this program, the role of EPA has largely been to support and encourage agriculture to find solutions to its soil and water conservation problems, rather than to impose strict, and perhaps unenforceable regulatory guidelines.

EPA activities have included participation in the joint U.S.-Canadian study of the soil erosion in the Great Lakes (Pollution from Land Use Activities Reference Group or PLUARG), and funding of demonstration programs under Section 108 of the Water Quality Act. Included in these activities were the study of the environmental impact of land use on water quality (Black Creek Project) in Indiana, the Washington County and Red Clay Projects in Wisconsin and a program to provide an Extension agronomist to work one-on-one with farmers in a Michigan ASCS demonstration project.

EPA has supported interagency personnel agreements with agencies traditionally associated with agriculture (Extension—ASCS—Soil Conservation Service). This has resulted in persons familiar with agriculture being included in policy and implementation decisions affecting agriculture.

Nationally, EPA has worked with the National Association of Conservation Districts to provide support for districts and states trying to develop nonpoint source implementation plans as required by the Water Quality Act of 1972 and subsequent amendments to the act.

Farmers: HOW CAN THEY BENEFIT?

Individual farmers benefit in at least two major ways by participating in the Tri-State Tillage Demonstration Projects:

They:

1. find out how well they can manage a conservation tillage system on their own farms without having to invest large amounts of scarce resources in new tillage equipment.
2. by looking at the data collected in their county, get an idea of how well adapted various tillage practices are to farms like their own.

Many of the management practices that are combined into a conservation tillage system have already been the subject of intensive research in the states involved in the tillage demonstration projects. The effect of such things as planting data, crop residue, pesticide management, and a host of other production practices has been well documented by university, government, and private researchers.

Demonstration plots are not intended to be research plots, although information obtained can point the way to needed research efforts. Demonstration plots, however, provide an additional dimension for research data.

Since the tillage system is being managed by a farmer, not a professional researcher, other farmers are quickly able to see how well the system can fit into a producing farm operation.

For the farmer, the important finding is often not whether one system or another produced a slightly better yield, but whether any of the systems produced a satisfactory yield, that would increase the profitability of the crop.

Successful application of conservation tillage requires different management techniques, and sometimes provides a more challenging test of the farmer's skill and judgement than conventional tillage.

By providing farmers a chance to experiment with various tillage systems at a low cost, the tillage projects should speed the adoption of conservation tillage on farms where it is properly adapted.

1982:

ACCOMPLISHMENTS

For all except two of the districts involved, 1982 marked the beginning of the accelerated tillage demonstration projects in participating counties in the Western Basin of Lake Erie. Those districts, Defiance and Allen in Ohio, begun work in 1981.

In 1982, 902 plots representing 11,379 acres in 18 counties in three states were involved in the project.

Each of these participating districts, acquired no-till planters and/or ridge-till planters and cultivators. These were made available to farmers either free of charge or for a small maintenance rental fee. Farmers, with the assistance of a district tillage technician, usually did the planting and in all cases, provided other production inputs such as seed, fertilizer, pesticides, etc.

As a part of the project, each district set up a county-wide conservation tillage task force and conducted some type of information program to inform the farmers of the project opportunities.

Various types of information programs were conducted including newsletters, newspaper stories, radio programs, and in at least one case, television programs.

As a part of the informational effort, a growers meeting was conducted in each county, open to all farmers interested in the project. The growers meeting was followed by a training session specifically for farmers who had elected to participate in the demonstrations.

In addition to convincing farmers to participate and providing training, districts had the responsibility for collecting data on the demonstration plots and preparing a report for EPA.

Summary information on yields for various tillage systems under various types of crop residue and with various nitrogen form applications is presented elsewhere in this report.

The volume of data collected during 1982 is not reflected in the tables presented this year. Information was collected on items not reported such as variety, pesticides used, type of planter used, population planted and population standing after three weeks, unusual conditions which affected yield, planting date, planting method, etc.

In a separate effort, work has begun to evaluate the potential impact of the tillage demonstration projects on Lake Erie Water Quality. This work being done by Dr. David Beasley, of Purdue University, makes use of a computer based simulation model, ANSWERS, which predicts the impact of tillage systems on water quality under various rainstorm-runoff conditions.

1983

PLANS

Lake Erie Conservation Tillage Demonstration Project will be expanded during 1983 to include 11 new counties in Ohio and one new county in Michigan. With the growth of the project scope to include 31 counties in Indiana, Michigan, and Ohio, the project area will cover most of the Western Basin of Lake Erie.

With a year's experience in hand, work is expected to progress smoothly in 1983. Particular attention will be paid to collection of field data and analysis of the impact of the project on water quality.

To evaluate the water quality impact, two approaches will be used. First, will be expanded use of the ANSWERS computer model to evaluate success. Secondly, estimates of the amount of soil saved by the application of various tillage systems will be made.

During 1982, a microcomputer program was prepared to manage the data arising from the projects. During 1983, data collected in both 1982 and 1983 will be entered into the data base. The use of this tool will expand the scope of the data which can be presented in subsequent reports to include more precise analysis of agronomic and economic benefits.

Because of the nature of the cropland in the first 19 counties participating in the project, the primary form of conservation tillage applied has been no-till. Of the counties to be added in 1983, many of the soils are heavy and wet, so that no-till planting may not be the form of conservation tillage desired. As a result, it is expected that a large increase in the amount of ridge-till will be seen. Ridge-till is generally considered to be more suited to heavy, wet soil areas.

Additional in-service training is expected to be provided for tillage technicians working on the projects during 1983. Emphasis will be placed on some of the strategies which can help assure the success of a conservation tillage effort. Specifically, emphasis will be placed on integrated pest management programs which seek to control weeds, insects and disease in the most cost effective and most environmentally sound manner. Also, emphasis will be placed on nitrogen management programs, intended to make sure that nitrogen and phosphorus fertilizers remains on the land where it will be available to growing crops. The timing of nitrogen application and the form in which the nitrogen is applied can have impacts both on crop production and on water quality.

Growing Season:

Spring came slowly to the Corn Belt in 1982, but when it finally arrived, it sent farmers scurrying to the field. Although the counties in the tillage project area experienced some weather problems which were not general in the Midwest, those problems tended to favor rather than hurt fields which retained significant residue on the soil surface.

March of 1982 was cold. Temperatures averaged 5-6 degrees below normal. The cold weather continued through mid April. In late April, the weather became warm and dry—ideal for field work. Farmers quickly made up for the earlier lack of good field days. The warm, dry weather of the first three weeks of May produced dramatic increases in soil temperatures. Soil temperatures which had averaged about 50 degrees at the beginning of the month, climbed to more than 80 degrees by the end of the third week. Warming conditions thus were sufficient to warm soil still covered by crop residue as the result of conservation tillage systems.

Early June was cool and wet. However, since crops were largely already planted and soil temperatures were already high, the moisture was welcome to promote early growth of corn and soybean crops. The wet conditions in late May and early June prevented some farmers from reforming ridges through cultivation.

The summer of 1982 was cooler than normal (by 3-5 degrees) throughout much of the Cornbelt. In many areas, rainfall was above normal. However, there were limited areas of lower than normal rainfall. These areas (referred to as pocket droughts by climatologists) touched a significant part of the tillage demonstration project area, particularly in late July and during August. Crops being grown in these pocket drought areas benefited from surface residue left by conservation tillage systems.

The season, from September through mid-November, was cool and dry—nearly ideal for corn and beans harvest. As a result, the 1982 corn crop was well above average. The soybean crop, although above average, was not quite as good.

Farmers who did not complete harvest by mid-November faced a chilly, wet December. However, the number left in this situation was small. The cold and wet late November and December did cause problems for some farmers who planned to build fall ridges for 1983 ridge-till crop production.

Economics

Farmers in the Lake Erie Basin, like their counterparts throughout the country, faced economic difficulties during 1982. For the third straight year, net farm income fell. American farmers saw the value of the products they sold drop $1 billion, while the cost of producing those products increased $1 billion. That, combined with other difficult economic situations, resulted in a decline in national net farm income to $19 billion. Net farm income was $25 billion in 1981.

As farm income and the value of farmland declined, the value of farmer equity followed. At $770 billion, farm equity was the lowest since 1979. Farmers had to go deeper into debt to stay in business. The farm debt to asset ratio, which had been low at 16 percent in the late 1970's, jumped to 20 percent by the end of 1982.

Several economic forces, not all of them directly connected with agriculture, combined to make financial conditions difficult for all of agriculture and agribusiness. Low crop prices, in part resulting from abundant domestic supplies and a dwindling export market, contributed to the problems. Continued high interest rates increased production costs and impaired an already tight cash flow situation. Declining value of farm land made it more difficult for many farmers to obtain operating loans, even at the high interest rates being charged.

To cope with falling prices and rising production costs, farmers sought ways to reduce the investment of time, capital, and energy necessary for crop production. In the Midwest, the search for more efficient production methods increased farmer interest in conservation tillage. Farmers found that equipment for conservation tillage had become more available. Research plots had demonstrated that the systems such as no-till and ridge-till could produce good yields on a variety of soil types and under a variety of growing conditions. Farmers could thus see a way to save money, soil, and water at the same time.

However, the same economic conditions which have heightened farmer interest in conservation tillage systems, contribute to the difficulty faced by an individual farmer in considering whether to adopt the practice. A change in tillage systems requires capital outlay and a measure of risk which may be difficult to accept in poor economic times.

Summary:

SUMMARY DATA TABLE

		No. of Plots	Acres
Indiana	Adams	26	482
	Allen	60	1,419
	Dekalb	13	276
	Noble	3	56
	Steuben	0	0
	Wells	2	85
Ohio	Allen	192	2,036
	Crawford	43	686
	Defiance	173	1,892
	Hancock	34	261
	Hardin	27	311
	Huron	30	435
	Lorain	36	466
	Medina	70	773
	Putnam	80	492
	Seneca	46	826
	Wyandot	51	825
Michigan	Hillsdale-Lenawee	19	279
TOTALS		902	11,379

The importance of conservation tillage in programs designed to reduce phosphorus loadings to lakes (such as Erie) has been demonstrated in many studies.

The voluntary acceptance of altered tillage systems requires that the new tillage system be economically, as well as environmentally, sound.

Data from 1982, as reported for participating counties on the four preceeding pages, furnishes information on one important factor in the economic equation—yield response. The relative profitability of the various tillage systems can only be determined if costs, as well as yield, data is available. A more detailed economic analysis will be a part of future reports. Yield data is informative, however; since yields must be acceptable under any tillage system if it is to be seriously considered.

Although the tables provide information for all counties, only those counties which had a minimum of 10 no-till and 10 conventional plots are discussed in this summary. In counties which satisfied this requirement for corn, no-till yield on demonstration plots exceeded the county average (as determined by the Statistical Reporting Service) in all counties except Allen County, Indiana. In each of the six counties which met these criteria, conventional yields exceeded the county average. In half of the cases, the no-till yield exceeded the conventional yield.

For soybeans, only two counties, Allen and Defiance in Ohio, met the minimum requirement. In both cases, yields were comparable to the county average but in each case, both conventional and no-till demonstration yields exceeded the average.

In general, differences among yields were small and the first year's data can be taken to indicate that well managed no-till systems on properly adapted soils in the tillage project area can produce yields as good as or better than the appropriate county average.

Very little data on ridge-till, as opposed to no-till, is presented in the 1982 results. This information will be provided in 1983 reports.

No-till systems are usually conceded to be better adapted to lighter, well-drained soils. Yields are usually lower when no-till systems are applied to cold and wet soils.

Although no attempt is made here to summarize other aspects of the data, it is instructive to observe in each county the acceptability of yield under different fertilizer application methods (surface applies or injected) and in residue from different types of crops.

Finally, it should be noted that 1982 county average soybean yields exceeded 1981 yields in each case. Average corn yields were higher in every county except one, indicating a good growing season in the demonstration area.

PHOSPHORUS STUDIES

Phosphorus is a key nutrient for crop production, but it is also a key nutrient contributing to the pollution of Lake Erie. Because phosphorus fertilization has been stressed over the years on soils which are phosphorus poor, some concern has been expressed that farmers may be using too much phosphorus.

In 1982, 330 soil samples were analyzed in Defiance County, Ohio for phosphorus levels, measured as Bray P_1. The results are presented in the following table.

Bray P_1 Soil Test	# of Samples
0- 19 #	24
20- 39 #	76
40- 59 #	72
60- 79 #	60
80- 99 #	34
100-119 #	18
120-134 #	14
135 + #	32
	330

Ohio State University agronomists say that the optimum Bray P_1 soil test levels are 30 pounds for soybeans, 40 pounds for corn and 55 pounds for wheat. As can be seen from the table, 48 percent of the samples analyzed exceeded 60 pounds per acre and 19 percent of the samples had readings as high as 100 pounds per acre.

SUBCOMMITTEE RECESS

Senator GARN. The subcommittee will stand in recess until 1 p.m. At that time, our first witness will be Mr. Larry Williams, the Washington representative of the Sierra Club.

Thank you, very much.

[Whereupon, at 11:40 a.m., the subcommittee was recessed, to reconvene at 1 p.m., the same day.]

(AFTERNOON SESSION, 1 P.M., MONDAY, MAY 23, 1983)

NONDEPARTMENTAL WITNESSES

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF LARRY WILLIAMS, WASHINGTON REPRESENTATIVE, SIERRA CLUB, AND ALSO REPRESENTING THE FRIENDS OF THE EARTH

Senator GARN. The subcommittee will come to order.

Our first witness this afternoon is Mr. Larry Williams, Washington representative for the Sierra Club.

Senator GARN. Please proceed.

Mr. Williams. Thank you, Mr. Chairman. I very much appreciate an opportunity to testify today.

I am Larry Williams, congressional representative of the Sierra Club. I am also representing today Friends of the Earth.

Senator GARN. You get used to it after 10 or 12 years.

Mr. WILLIAMS. We continue to be deeply concerned over the drastic budget cuts imposed on the Environmental Protection Agency by the Reagan administration. Ann Burford's position before this committee, as you well know, is since she and her deputy were such good managers, she could do what previous Administrators could not; manage the agency with less people and less funds. The recent history at EPA has proved that testimony to be disastrously wrong.

There is no question that EPA's ability to carry out its mission has been seriously crippled by the budget cuts of the 2 previous years. The Nation has watched with shock and amazement the disastrous events unfold at EPA over the last few years. The appointment of Mrs. Burford and her deputies was a disaster.

Faced with the unpleasant fruits of his own ill-considered appointments, Mr. Reagan is clearly banking on one man to restore the public trust in his stewardship of the Nation's environment and natural resources, William Ruckelshaus.

One can see how the White House staff turned so enthusiastically to the idea of putting "Mr. Clean" back in charge of EPA. But the President is deluding himself if he thinks that he can solve the many serious environmental problems brought on by 2 years of mismanagement, coupled with unjustified budget cuts, merely by bringing in an Administrator who has a better public image.

Mr. Ruckelshaus is going to need the strong support of the Reagan administration and the Congress if he is going to accomplish the difficult task of rebuilding public confidence in the Environmental Protection Agency. He cannot begin to put EPA back in working order with the budget the House Appropriation's subcommittee recently recommended.

The Agency's operating budget has been cut 24 percent between 1981 and 1983. The House subcommittee proposed that only 4 percent of that cut be restored. It is clearly unsatisfactory.

We are very pleased to see that the Senate, in the passage of its first budget resolution, included the $1.351 billion ceiling for EPA's operating budget and $383 million for Superfund. Since the House of Representatives has passed a ceiling of $1.3, that should assure this subcommittee the authorization it needs to fund EPA at the 1981 level.

The Sierra Club endorses that funding level and urges the committee to adopt that amount for the operating budget.

If you adjusted that amount for inflation, it would actually represent a 31-percent cut over 1981; it would be calculated to be $1.81 million if we actually went back to today's dollar.

All of EPA's programs is not as abstract a concern to the American people as one might think. This administration has totally misunderstood that environmental concerns, is for most people, a very personal, real, and local concern. The quality of EPA's work eventually hits people where they live. They care about the environment, not for abstract, philosophical reasons, but because environmental problems affect their own lives and communities. Their concerns are not about people they see on television but about people they know and love; their thoughts are on the effects and on their own health, the health of their children. Environmental quality is not just a health issue or a quality of life issue, but one of the pocketbook issues which are so crucial in American politics. People are concerned about their property values if they live near hazardous waste dumps, their livelihood if offshore oil hurts fishing and tourism.

I have only read into the record a small portion of my testimony, Mr. Chairman. I ask that the full testimony be added into the record.

Senator GARN. It will be.

Mr. WILLIAMS. And that concludes my statement.

Senator GARN. Mr. Williams, I am disappointed in your testimony. I wish that it were possible—and I certainly don't prejudge all of it, but the last part of it when you are talking facts and figures are fine. But I get a little bit tired of having to politicize it, listening to "The administration and Mr. Reagan" on and on and on and on. That is a political statement.

Why can't you use your time to be a little more objective and address the facts? Everybody is well aware that there are big problems at EPA. Nobody condones many of the things that have happened there with Mrs. Burford and some of the administrators, certainly not I.

But I don't find it useful to use this subcommittee hearing as a political forum to push your political views and your condemnation of this administration. There are problems I have tried very hard to work out on a factual basis with witnesses on all kinds of subjects in here, and will continue to do so, to try on an objective basis. But your testimony would be far better received by this chairman if it were here on a factual basis, on a scientific basis, on what the Sierra Club can do rather than just coming in and making an attack. I just get damn sick of that kind of thing and extremes on both ends.

Mr. WILLIAMS. All right, Mr. Chairman——

Senator GARN. I'm not through. There are two extremes on this occasion. I think it's sad that the Sierra Club has had such a brilliant record over most of its history but the last few years has turned into a partisan political organization, and there are two extremes. There is no doubt that some of those who differ with you have concerns about the environment, too. There is considerable emotion that is brought into it.

I have seven children. The youngest is 11 months. I am worried about them. I want them to have health as much as anybody who belongs to the Sierra Club or the environmental groups.

Yet it constantly seems your testimony—and I don't mean you personally—but in general the environmentalists feel that if we don't agree with you, that somehow we don't care about human beings. I resent that—that tone in testimony, as well, because we do care.

There is a middle ground in here between those who don't care what we build or what we put into the air or the water. And the other side of the coin, those who think if you just appropriate money, that solves problems, too. There are a lot of people who have overreactions relative to the environment to unnecessary rules and regulations and bureaucracy and forms that put people out of work so that they can't feed their children any more.

I would just appeal for a little balance, just a little balance when you come here. You would be amazed what we could all do if we didn't have the extremes from one side to the other. I wish The Sierra Club, Friends of the Earth, and others could achieve that, because you feel that if we are not 100 percent with you, we are against you.

On your proposal that we spend more for canyon lands, liberate wilderness, I want 100-percent wilderness. I proposed an alternate plan—8 percent other use. I was condemned as the worst friend for wanting to asphalt the whole State.

So I am sorry. I was looking forward to your testimony. Certainly recognizing there are problems with EPA, I certainly hope Mr. Ruckelshaus can solve the problems down there. I thought you might be a little bit brighter, frankly, to come in and stick with the subject and the the issue than going to politicization, because you wouldn't have gotten a cent from me. I don't think that serves the environment well or achieves consensus.

I would be happy to hear any response you would like to make.

Mr. WILLIAMS. In deference to this subcommittee, I did not go into detail the reasons why we want more money for research, State grants, or the programs. If you would like me to do that, I can. Our testimony certainly discusses those issues. You will see on page 3 of our testimony, if you have a chance to look at it, that we have specific budget numbers for each of the major operating accounts. You will see that, as I previously said, they are the same numbers we asked this subcommittee to consider last year, and what we got was an additional cut to EPA. It has been extreme; you bet it has been extreme. The cuts to EPA have been very extreme. It has been very sad, and we are very upset about that, and that is what you hear in our testimony.

Senator GARN. You can approach that without the constant political editorializing.

Mr. WILLIAMS. They are political issues.

Senator GARN. Think of the issues on the other side where a lot of you have wasted a lot of money over the years without accomplishments over and over and over again, and you just think if you spend money, that solves the problem. I can show you a lot of places where a lot of money has been spent and the environment is still dirty because of unnecessary rules and regulations. It didn't have a proper balance; they weren't realistic at all. There are two sides of this coin, and I think I see them a hell of a lot better than you and those you represent do.

All I am asking for is a little balance, not requiring 100-percent agreement with you and anybody who doesn't is wrong. I have said a couple of times here, there have been some serious problems at EPA, and I will do everything I can to help correct those.

Mr. WILLIAMS. We feel that the recommendations that we have made for increasing EPA's budget are very conservative and very moderate. We think they probably could use a great deal more. We recognize the Agency can only absorb so much money in one given year. The Agency, last year, the groups felt the agency should be funded in excess of $2 billion, which, of course, was unrealistic, given that no agency can absorb that kind of funding so quickly. We have tried to be reasonable

The numbers are reasonable. The House of Representatives agrees, and I gather from the budget ceiling that passed the Senate, the majority of the Senate agreed.

If you call that unreasonable, I am very sorry.

Senator GARN. No, I did not. I did not read your entire statement. It might be very factual and very helpful to this subcommittee in making decisions. I was talking about the editorial comments that I didn't feel added anything to your testimony, it only detracted from it, the political comments during most of your summary. I am not even disputing the figures with you at this point. They may be very wise and very helpful.

I just don't think it is necessary to come in and have to make those kind of political editorial comments as you did. Your whole organization would have been better off if you would stay out of politics and some of those activities and concentrate on substance. That means you come in here and you say, "I think this budget is wrong; I think it is too low; I think we need more here" on a factual basis.

Mr. WILLIAMS. Thank you for the advice, Mr. Chairman.

Senator GARN. Well, you are willing to give plenty of it out. I think I have an opportunity to speak mine very well, too.

Mr. WILLIAMS. You certainly are.

Senator GARN. As long as I am chairman of this subcommittee, let's try and just keep the bipartisan politics out of it, and let's just have substance, and you will get along fine with me.

Mr. WILLIAMS. Thank you, Mr. Chairman.

Senator GARN. Thank you for your sarcastic "Thank you."

[The statement follows:]

STATEMENT OF LARRY WILLIAMS ON BEHALF OF THE SIERRA CLUB AND FRIENDS OF THE EARTH

Mr. Chairman, my name is Larry Williams. I am a Washington Representative for the Sierra Club. I am representing today the Sierra Club and Friends of the Earth.

We continue to be deeply concerned over the drastic budget cuts imposed on the Environmental Protection Agency by the Reagan Administration. Ann Burford's position before this Subcommittee was that, because she and her deputies were such good managers, she could do what previous administrators could not - manage the Agency with less people and less funds. The fact that the agency is now preparing a revised budget request for FY 84 represents an admission that the cuts sought over the last two years were based on ideology rather than being the result of a thorough analysis of the agency's needs. There is no question that EPA's ability to carry out its mission has been seriously crippled by the budget cuts of the previous two years.

The nation has watched with shock and amazement the disasterous events unfold at EPA over the past few months. The appointment of Ms. Burford and her deputies was a disaster. Faced with the unpleasant fruits of his own ill-considered appointments, Mr. Reagan is clearly banking on one man to restore public trust in his stewardship of the nation's environmental and natural resources: William Ruckelshaus. One can see how the White House staff turned so enthusiastically to the idea of putting "Mr. Clean" back in charge of EPA. But the President is deluding himself if he thinks he can solve the many serious environmental problems, brought about by two years of mismanagement coupled with unjustified budget cuts, merely by bringing in an administrator who has a better public image.

Bill Ruckelshaus is going to need the strong support of the Reagan Administration and the Congress if he is going to accomplish the difficult task of rebuilding public confidence in the Environmental Protection Agency. He cannot begin to put EPA back in working order with the budget the House Appropriations Subcommittee has recommended. The Agency's operating budget has been cut by 24 percent between FY 1981 and FY 1983. A four percent increase in FY 1984 will not begin to do the job of rebuilding EPA.

Last year the Sierra Club urged this Subcommmittee to fund EPA's FY 1983 operating budget at $1.35 billion. We are again calling for an operating budget of $1.35 billion for FY 1984 - a return to the Agency's 1981 funding level without an adjustment for inflation. Adjusted for inflation, this level of funding would still be 30% less than what the agency received in FY '81. In today's dollars, the FY '81 budget would total approximately $1.8 million.

The right hand column of the following table displays the budget we recommend for EPA for FY 1984. Ten of the national conservation organizations have endorsed this funding proposal for EPA.

EPA OPERATING BUDGET: ($ in millions)

Media	FY 1981 App.	FY 1982 App.	FY 1983 App.	FY 1984 Reagan	FY 1984 Env. Alt.
Salaries and Expenses	561.7	555.1	548.6	540.3	555.1
Building & Facilities	4.1	3.6	3.0	2.6	3.0
Research & Development	250.5	154.4	119.0	111.7	329.4
Abatement, Control & Compliance	534.8	372.9	369.1	294.0	447.9
Total EPA Operating Budget:	1,351.1	1,086.0	1,039.7	948.6	1,335.4
Superfund:	74.7	190.0	210.0	310.0	320.0
+State Grants:	274.0	238.0	231.0	172.8	338.0

+State Grants included in the Operating Budget Figures.

RESEARCH

Our proposed $210 million increase over the FY 1983 appropriated funding level for Research and Development would return this program to approximately the FY '81 level with an adjustment for inflation.

The Agency's ability to do research has been severely damaged. Ms. Burford used to say that good regulation is dependent upon good research. Ironically, by FY 1983 she managed to cut EPA's research budget to less than half of its FY 1981 size. Associate Administrator Joseph Cannon recently told the Sierra Club that 70 percent of the cuts in the R&D budget were due to the completion of research projects. While several major research projects undoubtedly have been completed, his statement implies that there is little new research that deserves the Agency's attention. I believe that the Natural Resources Defense Council has submitted to this Subcommittee a long list of priority research projects that they feel EPA should be funding. This list demonstrates that there is no shortage of places to put additional research funds to good use.

The cuts over the previous years involve sharp declines in epidemiological research, clinical research and long term health and safety research. EPA cannot protect us from health hazards if they cannot do the necessary research to identify those hazardous substances being introduced into our environment.

There are over forty thousand chemical products in commerce in the United States. From twelve to fifteen hundred new products will come to EPA this year for premanufacture review. We have little information regarding what the vast majority of these products do to living organisms, how they enter our environment, how they travel through it, where they may be accumulating, or how many people are exposed to them. Congress passed the Toxic Substances Control Act in 1976 to require EPA to screen new and existing chemicals and to protect the public from those that endanger human health. Due to previous budget cuts, this screening process has slowed to a crawl so that it will be decades before we even learn what is dangerous. By then it will be too late for many Americans. During World War II, my father was an asbestoser in Oregon on the Liberty ships. He is now living with a time bomb. How many more such time bombs are waiting to explode? At the current rate of research funding at EPA we can almost guarantee that we will never know about the environmental risks we are taking until it is too late to do anything about it.

Industry has no incentive to conduct the research needed to support regulation. The states do not have the resources to do so. If EPA fails to move ahead, critical safety and health regulations will be delayed, including hazardous waste regulations, hazardous air pollution regulations, and effluent guidelines for toxic water pollutants. This is precisely what has happened during the past two years.

STATE GRANTS

We recommend a $107 million increase over the FY '83 level for the State grants program. This would bring the existing grants program back to historic levels, although it would not provide for program expansion. I am sure this Subcommittee is well aware of the states desperate need for additional funds to manage the federal environmental pollution laws.

The states are experiencing severe general revenue reductions and will undoubtedly cut back on environmental programs. For instance, in the past few months, the governors of New York, New Jersey, Virginia and California have all announced severe cutbacks in state services as a result of revenue shortfalls. There is no way that state funding for environmental programs can remain at current levels if EPA's state grants program is not substantially increased.

For example, the state water administrators issued a statement on February 1, 1983, which stated that the President's proposed reduction by 56 percent of Section 106 funding "...will devastate the states' ability to control toxic pollution....The timing is tragic given the expected increase in workload."

In testimony before the Senate Subcommittee on Toxic Substances and Environmental Oversight, Sandra Gardebring, Executive Director of the Minnesota Pollution Control Agency, said that "...the 'fat' has already been cut out as a result of past budget cuts, and further reductions will have inevitable effects on our ability to do our job. We believe...the [Minnesota Pollution Control] Agency as a protector of the State's environment may very well be at stake. We have already been forced to tell them [EPA] that we will be able to accept the New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants programs only if they are accompanied by the necessary funds."

Superfund

We recommend a $110 million increase over the FY 1983 appropriated level.

The Congressional Budget Office report, issued last week, on EPA's FY 1984 budget pointed out that "Thousands of [Superfund] sites require remedial action, and by the end of fiscal year 1982 the agency had initiated cleanup action at only 15 sites. It is not clear that the amount in the fund or the time frame being considered by the Administration is adequate to complete the program."

In fact EPA is openly saying to any who asks that the fund is not large enough to do the required cleanup job. Associate Administrator Joseph Cannon recently told the Sierra Club that the fund might be sufficient to cleanup only 100 to 170 sites, with co-op agreements accounting for an additional 119 sites. Remedial action, according to EPA, will have begun on about 75 sites by the end of 1984. To date only seven or eight sites have been cleaned up.

The Sierra Club has requested that EPA identify the extent of cleanup already taken at the 418 communities the Agency identified as having the worst hazardous waste programs in the nation. The public deserves to know whether the Administration is committed to cleaing up each of the sites and whether it plans to spend the $1.6 billion available. Specifically, we called on EPA to:

(1) issue an annual report on progress in Superfund implementation detailing the nature and extent of cleanup EPA has engaged in, the nature and extent of negotiations with responsible parties, and the schedule of cleanup for each listed site; and

(2) to provide the intended budget proposals over the life of the program.

It would be very helpful to this Subcommittee, we are sure, if you had the above information in hand. We urge the Subcommittee to request an annual report on the progress in Superfund implementation and intended budget proposals in its Committee report which accompanies the appropriations bill.

The Sierra Club is pleased to see that the Reagan Administration is willing to add $100 million to the Superfund program. We urge a $320 million funding level for FY '84.

AGENCY WORKFORCE

We propose that the staffing ceiling for FY 1984 be set at the October, 1981 level as reported by EPA in its monthly Payroll Report to OMB. This proposed staffing level is for programs funded out of the operating budget. The following chart shows that the number of employees at EPA has dropped off dramatically since 1980. In fact, if the Administration's proposed FY 1984 Permanent Full Time Employee (PFTE) staff reductions are implemented, the agency's staffing will decline to its 1973 level when the agency was less than three years old.

Date	12-80	10-81	10-82	Reagan FY 1984	Env. Alt. FY 1984
Total Emp.	14,927	12,665	12,273	10,447	12,665
PFTE	12,098	11,246	10,525	8,669	11,246

A report released by Senator Leahy on April 8 revealed that the Agency's regional office workload analysis supports our position that the workforce at EPA has been cut too far. "The 46% cut in the EPA operating budget (compared to the last Carter budget) leaves the agency 1,000 employees short of performing its duties in the 10 federal regions throughout the United States ...It will take an additional $48 million just to provide for the manpower necessary for EPA to do the job." The Agency's own analysis revealed, for example, that the regions will need 365 more employees in 1984 in order to manage the hazardous waste management program.

Senator Leahy's report notes that the regional employees represent only 17 percent of the Environmental Protection Agency's total employees. The report concluded that "...if the need gap in the Agency as a whole is the same as in the regions, the Environmental Protection Agency would need over 5,000 additional employees. This would mean increasing EPA's budget by one-fourth."

CONCLUSION

The quality of EPA's programs is not as abstract a concern to the American people as one might think. This Administration has totally misunderstood that environmental concern is, for most people, a very personal, real and LOCAL concern. The quality of

EPA's work eventually hits people where they live. They care about the environment not for abstract, philosophical reasons, but because environment problems affect their own lives and communities. Their concerns are not about people they see on television, but about people they know and love. Their thoughts are on the effects on their own health ... and the health of their childern.

Environmental quality is not just a health issue or a quality of life issue, but one of the pocketbook issues which are so crucial in American politics. People are concerned about their property values if they live near a hazardous waste dump; their livelihoods if offshore oil leasing hurts fishing and tourism.

STATEMENT OF DR. LEONARD H. WEINSTEIN, PROGRAM DIRECTOR (NEW YORK), ENVIRONMENTAL BIOLOGY AT CORNELL UNIVERSITY, ON BEHALF OF ASSOCIATION OF STATE UNIVERSITIES AND LAND GRANT COLLEGES

Senator GARN. Dr. Weinstein?

Mr. WEINSTEIN. Thank you, Mr. Chairman.

I am here—my name is Larry Weinstein. I am here representing the National Association of State Universities and Colleges. My background is as the program director for environmental biology at Boyce Thompson Institute, which is located at Cornell University, and I am adjunct professor in the department of natural resources, and, of course, I am here to speak about the EPA budget and about some of the impressions that I have personally had with the national association.

The big concern of the national association is that there be an increase in long-term research funding. It's the backbone of the university system and of other institutions, private institutions, as well, and it will help EPA to maintain its mandate which is, of course, to determine where pollutants occur, how they impact upon biological and unbiological systems, and also what happens to them once they're in the environment?

How long do they persist, for example, and how are they transformed which, of course, they are, and how do they get where they end up?

A good example of this, perhaps, is an aphorism. When I first started in air pollution, the common aphorism was that the solution to pollution is dilution and everyone believed it, and there were bumper stickers and everything else. It was a sore, and there was perhaps good reason to believe that the reservoirs of the upper atmosphere were enormous and that everything put into the air would be diluted and would have no effect.

This idea actually involved a tremendous capital expenditure by industry in the construction of tall stacks in order to dissipate noxious wastes from powerplants, from smelters, and so on.

Good examples of this occurred, even in Utah, as you know probably, by the Asarco smelter in St. Lake City and the Geneva steel smelter in Willow?

What happened was the EPA institution for the construction of tall stacks involved local problems: That agriculture was not damaged near the industry and there was little damage to materials and other things in that area. However, what was not known because there was not enough research, was what the long-term impact might be. Today, decades later, we are paying the price. We think we are paying the price, at least, and the price seems to be the occurrence of acidic precipitation which falls throughout the United States, but especially following the storm tracks from west to east and south to north, and ending up in the northeastern part of the United States and up in southern Canada.

This is not just a national problem and a transboundary problem as the Canadian-United States. situation would imply, but it is also a problem because, obviously, it occurs in Europe from pollutant transported from country to country in the degradation, apparently, of Norwegian and Finish and Swedish waters.

So, long-term research is needed to provide answers to these questions. It cannot be done by a series of 1-year proposals or 1-year grants that have no continuation. A scientific group should be asked to provide a proposal; some period of time should be agreed upon, and it should be funded at the beginning, very much like the National Science Foundation operates.

There are three, really, kinds of research that I think EPA should be funding. One of these would be what might be called mission-oriented or practical research, and the best example that I can think of is a program called the national crop loss assessment network. It is a group of four laboratories working under the authorization of the Corvallis Group. Each group is getting together annually planning research, the purpose of which is to determine a national basis for the loss of agriculture in dollars.

First, we determine the losses in terms of bushels of, say, wheat or soybeans, and finally, an economic assessment is made.

The program is an exquisite example of how EPA groups can cooperate with universities and other institutions, because we have, working together in this program, the scientists and the Corvallis Environmental Library, the energy and air office here in Washington, the Office of Air Quality Standards and Planning in North Carolina, and other agencies, along with people from North Carolina State University, Wisconsin Institute at Cornell, the University of California at Riverside, and the Argonne National Laborary. It is really an excellent program.

Unfortunately, as the program began, as it was set up as a 5-year project with increasing funding to compensate for increased crops to be studied and also the cost of inflation, the research went in that direction, but the funding went in the opposite direction. What has happened is the research is not doing what it should be. We are not getting the answers we should be getting.

For example, we were interested in the effects of mixed gases on crops because no gas occurs alone in the atmosphere. Unfortunately, all gases except ozone were eliminated from our studies, which is an important pollutant, and yet it takes a level of credibility away from our results if we are not looking at how ozone interacts with sulphur dioxide, which is the major pollutant of coal-fired powerplants and smelters and so on.

It should be continued; it should be expanded. It's a good program.

Now, that is mission oriented. That is what could be called beans in the bag research, the kind of research that is more basic would be exemplified by the centers of excellence in this country. There are eight of them. They are distributed regionally in this country, they each are operating on a different subject, their goals being training and long-range forecasts of impacts of pollutants. Again, since the centers have been in existence, there have been inputs in their funding.

Then, perhaps, what is the most important source of funds for universities and private institutions is the competitive grants program within EPA. It is the equal of any other competitive grants program in this Government. It has excellent supervision and administration; it has excellent peer reviewers.

It is certainly the equal of the National Science Foundation, National Institutes of Health, and any other agency.

There is one unfortunate part of it, and that is that it does not have very much money. So many scientists do not make application nowadays to this agency because if approved, there is no money to fund the grants. If one were to apply to the National Science Foundation for support, which is certainly a logical place, they will turn you down because you should be supported by the Environmental Protection Agency.

If one applies to the U.S. Department of Agriculture for funding, they will not accept your proposal because it excludes specifically air pollution. So it is a catch-22 situation. There is no place to go. The funding is inadequate; it lies somewhere in the area of about $10 million a year at the present time. The Agency and that group would operate much better if they had about three times that amount of money, and that would not be extravagant. They simply are not funding the true proposals and good research, long-term research, is not being supported in this country.

Thank you very much.

Senator GARN. Thank you very much, Doctor.

As you know, the committee has strongly supported the use of the peer review process to identify outstanding research projects. I see that you list this as one of the approaches that could be used to increase our fundamental understanding of the environment. Do you have any suggestions as to how EPA's peer review process could be improved, and do you consider peer review appropriate for both basic and applied research at EPA?

Mr. WEINSTEIN. Let me answer the first question first. In terms of how the system can be improved, the process, as far as I can see it, has been operating very well. Some of the peer reviewers, at least, that I know—at least I know their names—are distinguished scientists. The process works all right. It certainly works as well as the National Science Foundation or as well as any other peer review agency.

The problem, again, is that of the proposals that are submitted, a relative high proportion may be found of scientific merit, and of these, of scientific merit, funding simply is not there. They fund from the top down. It's a perfectly legitimate way of doing it, but many meritorious proposals are not funded.

As far as applied research is concerned, I think that applied research has to be funded, perhaps, more according to the needs of the agency at the particular time. In this case, that is, the national crop loss program was a response to a need for an economic loss assessment caused by ozone and other gases because of the 5-year review of the oxidant criteria guide.

I would say peer review for basic research, primarily, and in response to the needs of the Agency perhaps without peer review in the case of applied research.

Senator GARN. Thank you, Doctor, for your very straightforward, direct, and specific recommendations on these issues.

[The statement follows:]

STATEMENT OF DR. LEONARD H. WEINSTEIN, PROGRAM DIRECTOR, ENVIRONMENTAL BIOLOGY, CORNELL UNIVERSITY, ON BEHALF OF ASSOCIATION OF STATE UNIVERSITIES AND LAND GRANT COLLEGES

I am Leonard H. Weinstein, William Boyce Thompson Distinguished Scientist, Program Director for Environmental Biology, Boyce Thompson Institute for Plant Research at Cornell University and Adjunct Professor of Natural Resources, Cornell University.

I have been involved in research on the effects of atmospheric pollutants on plants for more than twenty years. I presently direct a group of scientists who are conducting research on the effects of fluorides, ozone, sulfur compounds, nitrogen compounds, acid rain, and PCBs on plants.

I am here today to testify on behalf of the Committee on Energy and Environment of the National Association of State Universities and Land-Grant Colleges.

I want to comment on the availability of adequate support for long-range basic and applied research on environmental problems within EPA and at universities and agencies outside of the EPA.

EPA's mandate is to regulate or abate the introduction of man-made toxic substances into the air, water and soil environments. This mandate cannot be completely effective without an understanding of (1) where in our environment the impacts might occur, (2) how they might affect living and non-living components of the environment, and (3) how substances may persist, be transformed, and transported over the long term. These are not questions that can be answered quickly.

Long-term research is the keystone for innovative and credible science in general; the environmental sciences are not exceptions. The aims of long-term research programs on environmental problems should be to provide new knowledge not only to aid EPA in its abatement and enforcement missions but also to assist Congress in its guidance of what EPA's goals and methods should be.

An example might best illustrate the importance of research in addressing environmental problems. When I first began research in air pollution, a popular aphorism was that "The solution to pollution is dilution." Not only did it rhyme, but it also seemed logical because of the vastness of the upper atmosphere. It's unfortunate that more heed wasn't paid to those who said that "What goes up must come down." Tremendous capital expenditures were made for the construction of tall smokestacks to disperse the noxious gases from coal-burning factories, smelters, and other industries, especially of oxides of sulfur and nitrogen. What became a "quick fix" provided short-term benefits by preventing local problems for neighboring communities and agriculture. But the trade-off appears to have been the initiation of a long-term problem remote from the source of the emissions in the deposition of the oxides of sulfur and nitrogen as acid rain.

We are still not certain of the extent of effects of acid rain on agriculture and forestry. On the one hand, there is evidence that acid rain in its present composition and degree of acidity may have no effects or even beneficial effects on certain crops grown in managed soils.

On the other hand, acid rain may be responsible for long-term detrimental effects on forests in areas of Europe, Canada, and the U.S. If a bit of speculation is allowed, we can presume that acid rain is a principal cause of the problem, but we should not ignore the long-term effects of ozone and the possibility of its combined effects with acid rain and other stresses.

Increased support for long-term basic and applied research is an important means by which EPA can fulfill its regulatory functions. Not only can the information generated by these research projects improve our understanding of environmental problems, such as those posed by acid rain and forest decline, but it also provides a reservoir of information in many disciplines that can be used for EPA's mandates. One can be assured that the existence of stable, long-range research programs at our universities and private institutes will provide the future manpower needs not only for EPA, but for this nation's industries. Scientists trained in these programs will have the capacity to prevent or solve environmental problems before they become of national and international consequence.

There are at least three different approaches that can be suggested by which EPA can acquire long-range environmental information.

One example, the most applied (or mission-oriented), is the EPA-sponsored National Crop Loss Assessment Network (NCLAN). NCLAN was designed as a five-year program to define the relationships between yields of major agricultural crops and three major air pollutants and their mixtures, ozone, sulfur dioxide, and nitrogen dioxide. The results were to be used to provide an economic assessment of air pollution-induced crop loss and to support the development and/or review of National Ambient Air Quality Standards. At its inception, the program was designed to advance the understanding of cause-and-effect relationships that determine crop response to atmospheric pollutants. Secondary objectives included the evaluation of the combined action of pollutants and other stresses important in agriculture such as drought, disease, and insects. Early in the program, EPA directed that the research be focused only on ozone, and there has been little research on sulfur dioxide, nitrogen dioxide, pollutant combinations, or the joint action of pollutants and other abiotic or biotic stresses. Although there is little doubt that ozone is the most damaging air pollutant to plants as a whole, one would never expect that ozone could occur alone in the atmosphere, or in the absence of other stresses that affect crop production. Possible interactive or synergistic effects of ozone in combination with other pollutants or stress agents on crops and forests remain largely unknown. Although most of the original primary objectives and all secondary objectives of NCLAN were eliminated because of reduced funding, the program has nevertheless been exceptional because there was excellent cooperation, coordination, and dedication by the EPA groups at Corvallis, OR, the Energy and Air Division in Washington, DC, the Office of Air Quality Planning and Standards at

Research Triangle Park, NC, and the five research sites at North Carolina State, University of California at Riverside, Argonne National Laboratory, Boyce Thompson Institute at Cornell University, and USDA in Beltsville, MD.

A second example of how EPA can acquire data on long-term effects of pollution is through the eight Research Centers of Excellence, established to provide (1) research and training that emphasize long-term environmental problems, (2) forecasting of future problems by focusing and evaluating a large body of basic scientific knowledge, and (3) guidelines with respect to the kinds of research that are needed to evaluate the extent of existing and emerging problems. The centers are devoted to different areas of research and although awarded competitively, are distributed throughout the U.S. The center with which I am most familiar is the Ecosystems Research Center at Cornell University; this center is a good example of how basic and applied sciences interact to provide imaginative and productive approaches to an understanding of environmental problems through the application of ecological sciences, and where young graduate students and recent Ph.D.'s can study and train with more experienced and distinguished scientists and professors. Unfortunately, as the environmental problems have become better recognized, EPA has reduced the budget.

A third approach for acquiring long-range environmental information is through the Competitive Peer Review Research program which represents the most basic science supported by EPA. This program relies on innovative ideas generated by individual scientists and its peer review process and the criteria used to judge quality are the equal of the competitive grants programs of other agencies such as USDA and NSF. Unfortunately for scientists in environmental research, the appropriations have been inadequate to fund a high percentage of grants approved by the peer review process, and other granting agencies are not receptive to projects that fall within the orbit of EPA's interests. As a result, good programs that are often the training ground for graduate students and post-doctoral fellows remain unfunded.

There are a great many unanswered questions concerning the effects of atmospheric pollution on man's health and on the general quality of the environment. A great deal of information is and will be needed to better understand what we can or should tolerate in the environment, what can be done to ameliorate problems with which we are currently faced, and perhaps most importantly, what can be done to prevent severe environmental problems in the future.

Thank you, Senator Garn and Members of the Committee, for the opportunity to present this testimony.

FEDERAL EMERGENCY MANAGEMENT AGENCY

STATEMENT OF ROBERT H. TAFT, JR., FORMER U.S. SENATOR FROM OHIO, ON BEHALF OF DOSIMETER CORP. OF AMERICA

ACCOMPANIED BY RANDY STAYIN

Senator GARN. Senator Taft?

We are happy to welcome you to that side of the table. I would just as soon have you back on this side.

Mr. TAFT. Thank you very much, Mr. Chairman. I sometimes miss being there; sometimes I don't.

Senator GARN. I understand. Please proceed.

Mr. TAFT. I have with me today my partner Randy Stayin.

Mr. Stayin. Good afternoon.

Mr. TAFT. Mr. Chairman, I ask consent that my prepared statement as submitted to the committee be included in full in the record.

Senator GARN. Without objection.

Mr. TAFT. And that there also be in the record a copy of a letter written by me to David Mc Laughlin, Deputy Associate Director of FEMA, dated May 3, on the appeal of Dosimeter Corp. of America under OMB Circular A-76.

Senator GARN. Without objection.

[The statement and communication follow:]

STATEMENT OF ROBERT TAFT, JR., COUNSEL TO THE DOSIMETER CORP. OF AMERICA

I am Robert Taft, Jr. of the law firm of Taft, Stettinius & Hollister, Counsel of the Dosimeter Corporation of America. Joining me is my partner, Randolph J. Stayin, who is here with me to answer any questions that the Subcommittee may have on which I may not have as full information. We appreciate the opportunity to appear today to bring to your attention an example of wasteful government spending which can yet be avoided through private sector performance of the work which is alleged to be an ultimate goal of the project. We believe that the Congress must make a decision as to whether it wants the Federal Emergency Management Agency (FEMA) to go into the business of manufacturing radiation measuring devices called dosimeters and whether it wants FEMA to conduct in-house production engineering work on such items at substantially higher cost than could be performed in the private sector.

We are all concerned with the looming deficits and difficult budgeting decisions which must be made. I know that you are concerned about finding ways to avoid wasteful spending in order to help reduce that deficit. I hope my testimony will be of assistance to you in finding a way to avoid wasteful spending by reversing a decision which establishes a frightening precedent of the Government creating its own manufacturing capability in conflict and competition with a capability available in the private sector.

FEMA is asking for an authorization of an appropriation to continue "pilot production" of these specialized instruments. These instruments will be produced in a private facility currently under construction in Rolla, North Dakota. We are informed by FEMA that costs associated with the project are: $500,000 in 1981, $1,738,548 in 1982, and $1,200,000 estimated in 1983. While we do not know how much of those funds have been spent, FEMA indicates that it has obligated approximately $1,046,000 to date. The alleged purpose of this project is to develop production engineering for low-cost dosimeters and to produce 20,000 dosimeters and 10,000 dosimeter chargers. FEMA has stated that this production engineering will be transferred to the private sector for out-year procurement of up to 21 million dosimeters and 7 million charging units. At FEMA's estimated cost of $30 per dosimeter and $20 per charging unit, the anticipated procurement would be $770 million.

I have attached as Exhibit 1 to my Statement extracts from the contract for this project which include a cost estimate of $3 million. This does not include the additional cost of $1.6 million which would be payable as rent over ten years for use of the facility. You will note that the contract specifies that production capability created by this installation is 1 million units per year per shift. With the potential of three shifts per year and a ten-year lease, this facility with this investment could produce 3 million dosimeter units per year or 30 million dosimeters over the life of FEMA's lease in Rolla. The contract, lease and statement of work regarding this project define its purpose as being the "production" or "manufacture" of radiological measuring devices. This massive expenditure of tax dollars for a production capability of 3 million units per year raises serious doubts as to FEMA's stated intent to pilot-produce only one run of 20,000 dosimeters.

We believe that FEMA intends to manufacture its entire requirement of dosimeters and chargers and to offer its capability for manufacturing dosimeters for the Army, Navy and other governmental entities which may have need of them. Having invested $3 million in this "production engineering" project, having a $1.6 million in a ten-year lease, and having trained production personnel and established production for 3 million dosimeters per year, FEMA will then be in a position to come to this Subcommittee and ask for procurement of dosimeters to be produced in-house at Rolla. Having already made this large investment to reach this capability, it would be claimed as a waste not to use it to manufacture dosimeters. Since the private sector at this point would have to invest funds in some additional equipment and incur other cost in order to produce the "new" FEMA design dosimeter, the private sector probably would not be able to match FEMA's cost, which at that point would not include additional costs the private sector might have to invest. Having already sunk $4.6 million into creating this manufacturing capability, this Committee would be asked to find that it has only one responsible choice, to support in-house manufacture of the dosimeters.

The Dosimeter Corporation of America (D.C.A.) is a small business which manufactures dosimeters in Cincinnati, Ohio. It has an impressive list of customers which purchase D.C.A. manufactured dosimeters and a list of such customers is attached hereto as Exhibit 2. D.C.A. believes that it can conduct the production engineering developmental work and produce the 20,000 dosimeters and 10,000 chargers at approximately one-third to one-half of the $4.6 million investment anticipated by FEMA. D.C.A. believes that use of its facility, much of its current equipment, its trained production personnel and experienced production engineers would result in substantial cost savings on this project. The exact amount of cost savings would depend, of course, upon the contract requirements of FEMA. The real world production experience of D.C.A. would be invaluable to FEMA in developing the production engineering design. It seems ludicrous that a government agency that has never mass produced a dosimeter would not take advantage of the economies and efficiencies of a private sector company that specializes in what FEMA is attempting to achieve.

FEMA made this decision to do the production engineering in-house without any consultation with or requests for bid from the private sector producers of dosimeters. FEMA has not developed specifications or an overall cost target for its production. There is substantial risk of major cost overruns in their absence. It made this decision without doing the required OMB Circular A-76 cost comparison which is required in order to determine whether or not it would be economically more feasible to do this work in the private sector than in-house.

OMB Circular A-76 states that:

> In a domestic free enterprise economic system, the Government should not compete with its citizens. The private enterprise system, characterized by individual freedom and initiative, is the primary source of national economic strength. In recognition of this principal, it has been and continues to be the general policy of the Government to rely on competitive private enterprise to supply the products and services it needs... The Government's business is not to be in business. Where private sources are available, they should be looked to first to provide the commercial or industrial goods and services needed by the Government to act on the public's behalf.... When private performance is feasible and no overriding factors require in-house performance, the American people deserve and expect the most economical performance and, therefore, rigorous comparison of contract costs versus in-house costs which should be used, when appropriate, to decide how the work will be done.... Certain functions are inherently governmental in nature, being so intimately related to the public interest as to mandate performance by Federal employees.... "Governmental function" is a function which must be

> performed in-house due to a special relationship in executing governmental responsibilities. Such governmental functions can fall into several categories:
>
> > (3) in-house core capabilities in the area of research, development, and testing, needed for technical analysis and evaluation and technology base management and maintenance. However, requirements for such services beyond the core capability which has been established and justified by the agency are not considered governmental functions."

FEMA claims that it is not subject to A-76 in this matter because it is research and development. We would like to know why a production capability of 30 million dosimeters would be considered research and development? Certainly, a much smaller investment in capital equipment and plant could achieve the alleged production engineering results for 20,000 dosimeters. More importantly, my client already has the trained employees, production knowledge, and much of the machinery and equipment which will be required for this project. If this work were being done through my client or another private company (and at least one other such facility exists in the U.S.), we believe greater cost savings could be achieved by avoiding the purchase of much of the equipment, the cost of training new personnel in the techniques of producing a dosimeter, and the payment of $1.6 million in rent.

FEMA states that the decision to work in-house was not based on cost factors but was based on the need to conduct development where the government could control the collection of data on all associated processes, where there can be intense scrutiny of each manufacturing step to identify and solve problems as an integral and necessary part of development. There is absolutely no reason why FEMA cannot accomplish these purposes in a private sector plant at a lower cost. More importantly, FEMA would have the advantage of experienced private sector personnel and engineers to assist it in solving the problems they anticipate in preparing an adequate set of specifications to meet large scale procurement. It is important to note that in the original decision to go forward with research and development of a low-cost dosimeter in 1976, the stated intention was to contract out the pilot production phase to the private sector.

It is also important to note that in the early 1960's, the Federal Government contracted with a division of the Bendix Corporation to do research and development on dosimeters. The Bendix work has been the basis upon which FEMA conducted additional research and development in-house to produce its current design. In conjunction with the current in-house FEMA research, a part of that research was contracted out to Monsanto to develop a unique plastic which can be used in the FEMA designed dosimeter. If research and development on dosimeters was not a governmental function core capability in the Bendix research, the Monsanto research, and the 1976 U.S. Government decision to do this same production engineering in the private sector, by what magic has production engineering now been transformed into core capability research which must be done in-house?

FEMA has questioned the capability of the private sector contractors to conduct this work based on alleged government problems in the past with dosimeters produced by those manufacturers. For example, FEMA has pointed to two contracts which D.C.A. has had with the Navy and alleges a 10% and 9% defective rate. My client's records under those contracts indicate a 0% and .8% defective rate. On the first contract Dosimeter has no record of any returns even though there was a one-year warranty in the contract. But assuming FEMA's number for defects, it still would indicate a maximum of 1.2% defective rate. On the other contract D.C.A. replaced in warranty 331 returned dosimeters out of 40,000 dosimeters shipped (.8% returned and replaced). The facts do not support FEMA's assertions as to the quality of the D.C.A.'s work. D.C.A. cannot speak for, nor be held responsible for the performance of its competitors.

FEMA states that its "decision reflects the fact that its laboratory experience and the production experience available in the private sector are too uncertain and unproven to allow award of a good contract to assure the desired product." We believe that the facts prove that FEMA is completely wrong. In fact, it is FEMA whose design and production experience are too uncertain and unproven to be conducted in-house to assure the desired product. In fact, the FEMA production facility does not yet exist.

Another factor that FEMA states in its decision to use government facilities was the "need to maintain levels of competency and expertise in precision manufacturing at the William Langor Jewel Bearing plant." We are informed that there are some procurement officers that doubt the competency and expertise at that plant. In any event, that is irrelevant since the FEMA project will not be conducted in the William Langor Jewel Bearing plant but in a facility owned by the Rolla Development Corporation and is located somewhere in the vicinity of the William Langor Jewel Bearing plant.

It has been the policy of the Federal Government to rely on private enterprise to provide commercial goods and services and not start or carry on any activity to provide a commercial product or service if the producer or service can be procured more economically in the private sector. OMB Circular A-76. FEMA cannot and did not attempt to justify its decision to go in-house on this project on a cost basis. It cannot establish a reasonable basis for its conclusion that it can do the work required by this project better in-house than it can be done in the private sector. I know from my own experience on the Senate Armed Services Committee, as I'm sure this Committee does, that development is done on a regular basis in the private sector. I have always believed that a Government agency generally cannot do it as efficiently, economically, and effectively as the private sector can.

It seems to me that neither the facts nor rationale justify categorizing this activity as calling for in-house performance by Federal employees. I very much appreciate you giving me the opportunity to express our views before you and urge that you require this work to be returned to the private sector before any further expenses are incurred by the taxpayers on this project. It is our understanding that none of the equipment has yet been installed in the Rolla plant, the lease has not yet been signed, and construction has not yet been completed. Therefore, it is not too late to shift this work to the private sector at great cost savings to the Federal Government. In that regard we urge that pending your consideration of this matter, FEMA be requested immediately to stop further expenditures, commitments, and activity on this project until this matter has been resolved. In particular, the General Services Administration intends to sign the lease on behalf of FEMA in the very near future which will create the obligation of $1.6 million over ten years. I appreciate your kind consideration of this request.

Exhibit 1

FEDERAL EMERGENCY MANAGEMENT AGENCY
MODIFICATION OF INTERAGENCY AGREEMENT

PAGE 1 OF 1

INTERAGENCY AGREEMENT NO.	2. MODIFICATION NO.	3. EFFECTIVE DATE	4. PROJECT/REQUISITION NO.
EMW-E-0694	M006	See Blk. 12	12651

ISSUED BY
Federal Emergency Management Agency
Acquisition Management Division
500 C Street, S.W., Room 728
Washington, D.C. 20472

6. AGENCY PERFORMING SERVICE
Defense Logistics Agency
Civil Preparedness
Defense General Supply Center
Attention: DGPO
Richmond, Virginia 23297

Pawlowski

PROJECT TITLE
Part 1: Mobilization Base Capability for Shelter Supplies
Part 2: EMP Protection

ACCOUNTING AND APPROPRIATION DATA *(If required)*

83-7-3760-2590-2-8100 (F) $210,000 Increase

DESCRIPTION OF MODIFICATION

The purpose of this modification is to increase funds for Part 2.

Accordingly:

1. In Block 10, add the following Accounting and Appropriation Data under Part 2:

"83-7-3730-2590-2-8310 (F) $210,000 Req. 12651"

2. In Block 11, delete the Total Value of Agreement and substitute the following:

a. "$3,522,200 - Total Value of Agreement"

b. "$210,000 - Total Amount Funded FY 1983"

3. The total funding for Part 1 and Part 2 of the Agreement is $2,238,548 and $314,200 respectively. The total funding is now $2,752,548 and is summarized below:

	"FY 1981 Funding	FY 1982 Funding	FY 1983 Funding	Total Funding
Pt. 1	$500,000	$1,738,548	$-0-	$2,238,548
Pt. 2	44,200	260,000	210,000	314,200
	$544,200	$1,998,548	$210,000	$2,752,748"

The Total Value of the Agreement is increased by $210,000 from $3,312,200 to $3,522,200.

($3,000,000 for Part 1 and $522,200 for Part 2.) The balance of $769,452 remains unfunded, $761,452 for Part 1 and $8,000 for Part 2 and is subject to the availability of funds during FY 1983.

As provided herein, all other terms and conditions of the agreement remain in full force and effect.

SIGNATURE OF PERSON AUTHORIZED TO SIGN	DATE	12. SIGNATURE OF PERSON AUTHORIZED TO SIGN	DATE
George W. Moll	FEB 28 1983	for Robert Wilson	28 FEB 1983
NAME & TITLE OF PERSON AUTHORIZED TO SIGN		13. TYPE NAME & TITLE OF PERSON AUTHORIZED TO SIGN	

FEDERAL EMERGENCY MANAGEMENT AGENCY
INTERAGENCY AGREEMENT

PAGE 1 OF 7

1. INTERAGENCY AGREEMENT NO. EMW-E-0694

2. EFFECTIVE DATE See Block 15

3. PROJECT/PURCHASE REQUISITION NO. 06131 and 12601

4. ISSUED BY
Federal Emergency Management Agency
AMD/Telecommunications Branch
1725 I Street, NW (GSA Bldg)
Washington, DC 20472
Attn: Les Davison (202)566-1732

5. NAME, TITLE & PHONE NUMBER OF EACH GOVERNMENT PROJECT OFFICER FOR BOTH AGENCIES

Carl Siebentritt (202)566-1617
(FEMA PO)

Tom Avino (804)275-4001
(Other Agency's Project manager)

6. AGENCY PERFORMING SERVICE
Defense Logistics Agency
Civil Preparedness Office
Defense General Supply Center (Attn: DCPO)
Richmond, VA 23297

7. PROJECT TITLE
Part 1: Development and Implementation of a Mobilization Base Capability for Shelter Supp.
Part 2: EMP Protection for Broadcast Stations and EOC's

8. PROJECT OBJECTIVE

Part 1: to establish a mobilization base capability for the production of radiological sets for shelters and postattack recovery

Part 2: to support a program that will provide EMP protection of selected broadcast stations and EOC's.

See page(s) (for work statement)

9. PERFORMANCE PERIOD OF AGREEMENT From the effective date of this agreement until 30 JUNE 1983 for Task 1, and until 30 September 1982 for Task 2

10. ACCOUNTING AND APPROPRIATION DATA

Part 1: 81-1-2111-2500-2-6320 ($150,000) 06131
81-1-2121-2500-2-6320 ($290,000) $500,000 (F)
81-1-2111-2590-6240 ($60,000-Navy)

Part 2: 81-1-3117-2500-2-6320 ($44,200) 12601
[illegible] $44,200 (F)
(F) 210,000 [illegible]

11. DOLLAR VALUE OF AGREEMENT
312
$3,312,200
Total value of agreement

544,200 Total amount funded FY 81 53

2,768,000 subject to availability of funds for FY82 and FY83

12. FUNDING [illegible]

FEMA Contracting Officer
Telecommunications Branch (Davison)
1725 I St., NW (GSA Bldg)
Washington, DC 20472

[illegible]

13. PURSUANT TO THE AUTHORITY OF

PL 81-920, Section 401(c) and Section 405

[illegible]

14. SIGNATURE OF PERSON AUTHORIZED TO SIGN Thomas [illegible]
DATE 6/22/81

15. SIGNATURE OF PERSON AUTHORIZED TO SIGN [illegible] Darlington
DATE JUN 25 1981

SCOPE OF WORK

The Defense Logistics Agency (DLA), Civil Preparedness Office (DCPO) in cooperation and coordination with FEMA shall utilize necessary facilities, personnel, and such other services as may be required for the establishment of a mobilization base capability for the production of radiological sets for shelters and postattack recovery. This project includes but is not limited to the following tasks and subtasks.

- Evaluate problems associated with the production, preprocurement, transportation, tooling, and/or special requirements associated with mobilization base capability.
- Examine alternative systems for the base production of these instrument sets and other shelter supplies.
- Establish criteria for and select locations for production from among candidate locations having high unemployment rates and idle production facilities. These are to include:
  - The jewel bearing plant at Rolla, North Dakota.
  - Indian reservations
  - Appalacia
  - Other areas meeting criteria
- Develop strategy for mobilization base capability. Determine magnitude of scale up and how it is to be accomplished.
- Develop production plan using selected resources. For example, molds and tools may be fabricated and maintained at one location and parts molded, assembled and tested at other locations.
- Procure and install capital equipment.
- Procure and install production tooling.
- Procure and install test equipment.
- Fabricate and tests molds.
- Pilot produce 10,000 each low range dosimeters.
- Pilot produce 10,000 each high range dosimeters.
- Pilot produce 10,000 each charging units.
- Provide management and engineering support to all phases of this project. The resources of the FEMA RADEF Instrument Test Facility shall be used as the prime source of technical expertise for the project.
- Assure, in coordination with FEMA's Radiological Test Facility/DGSC's Directorate of Technical Operations or any other applicable like activity, that required technical support is provided throughout the entire preprocurement and procurement phases.
- If determined appropriate and through competitive efforts, obtain management services from commercial enterprises to provide production and engineering skills.
- Visit prospective manufacturers for the purpose of ascertaining production capabilities, i.e., available equipment, skilled labor, and to determine overall cometency.
- DCPO will administer, authorize, and prepare necessary travel vouchers for all personnel associated with this project, e.g., DCPO and RITF.
- Establish a financial control system so that the estimated costs may be continuously refined and timely adjustments made to the funds available.

REPORTS & MEETINGS

- Monthly letter reports.
- Special reports at significant milestones such as completion of pilot production runs.
- Annual progress reports.
- Meetings will be held with the FEMA Project Officer at intervals necessary to maintain coordination and solve problems as they arise.

SPECIAL CONSIDERATIONS

- Utilization of available surplus resources for this projects requires consultation with other agencies. These include:
  - General Services Administration – Stockpile Management
  - Department of Interior – Bureau of Indian Affairs
  - Department of Commerce – Economic Development Administration
  - Small Business Administration
  - Department of Labor
  - Other DOD including DIPEC.

  The FEMA Project Officer will coordinate the consultative process.
- The FEMA Project Officer will also coordinate requisite relationships and inputs from the various Directorates and Offices within FEMA that are concerned with this project.

COST ESTIMATE

* Production capability for one million units per year per shift.

1. Capital Equipment Cost	$ 783,000.00
(a) installation	31,000.00
2. Tooling	113,000.00
(a) installation	12,000.00
3. Test Equipment (EST)	35,000.00
4. Molds	251,000.00
5. Pilot Production of Low Range (10,000 Units @ $30) (Includes Training)	300,000.00
6. Pilot Production - High Range (10,000 Units @ $30)	300,000.00
7. Pilot Production of Charging Units (10,000 Units @ $20)	200,000.00
8. Management and Engineering Support	700,000.00
Total	$ 2,730,000.00
Travel and other contingencies @ 10%	270,000.00
	$ 3,000,000.00

AVAILABILITY OF FUNDS

The total amount of this Part 1 of this Agreement is $3,000,000. Partial funding in the amount of $500,000 is currently available for Part 1. Although FEMA does intend to fund the full amount of this Part 1, it assumes no legal liability to provide funds in excess of $500,000. Obligation of the balance of the funding is contingent upon the future availability of appropriated funds for FY82 and FY83.

Exhibit 2

DCA CUSTOMERS

Beaver Valley - Duquesne Power & Light
Big Rock - Consumers Power
Calvert Cliff - Baltimore Gas & Electric
D. C. Cook - Indiana & Michigan Power
Fermi 2 - Detroit Edison
Fort Calhoun - Omaha Public Power
Ginna - Rochester Gas & Electric
Kewaunee - Wisconsin Public Service
Monticillo - Northern States Power
North Anna - Virginia Electric & Power
Oyster Creek - Jersey Central Power
Peachbottom - Philadelphia Electric
Prairie Island - Northern States Power
Watts Bar - TVA
Surrey - Virginia Electric & Power
Three Mile Island - Metropolitan Edison
WNP - Washington Public Power Supply System

Letter From Robert Taft, Jr., Counsel to the Dosimeter Corp. of America

May 3, 1983

Mr. David McLoughlin
Deputy Associate Director
State and Local Programs
and Support
Federal Emergency Management Agency
Washington, D.C. 20472

Re: Appeal of Dosimeter Corporation of America
Under OMB Circular A-76 Concerning Pilot
Production of Dosimeters in Rolla, North Dakota

Dear Mr. McLoughlin:

This is a follow-up to my letter of March 14, 1983 to FEMA in which Dosimeter Corporation of America (D.C.A.) requested a review of your decision in the above-referenced matter under Paragraph 11 of OMB Circular A-76. On April 11, 1983 Joseph Mealey submitted a memorandum to you as the deciding official's report on D.C.A.'s appeal. Thomas Ainora of your General Counsel's office has allowed me until May 3, 1983 to respond to Mr. Mealey's memorandum and offer any other written arguments that I wish to make on behalf of my client. This letter will serve to present D.C.A.'s written arguments.

This project is a classic example of wasteful Government spending, a clear violation of OMB Cicular A-76 and an abrogation of the policies of this Adminstration and Congress with respect to private sector initiatives, fiscal responsibility and support of the small business private sector. D.C.A. respectfully requests that you reverse FEMA's decision on this project in order to save our Government's limited tax funds, to preserve the small dosimeter businesses currently operating in the private sector and to avoid establishing the frightening precedent of the Government creating its own manufacturing capability in conflict and competition with a capability available in the private sector.

The FEMA contract for this project with the Defense Logistics Agency dated June 22, 1981 stipulates a cost estimate of $3 million in order to establish a "production capability for one million units per year per shift." (See extracts of contract attached hereto as Exhibit 1.) The cost estimate does not include any estimate of rent or construction costs. We have been informed by GSA that FEMA is in the process of negotiating a ten-year lease for use of a facility owned by the Rolla Development Corporation at a total cost of $1.6 million. With the potential of three shifts per year and a ten-year lease, this facility with this investment could produce three million dosimeter units per year or thirty million dosimeters over the life of FEMA's lease in Rolla. The contract, the current lease, and the statement of work regarding this project define its purpose as being the "production" or "manufacture" of radiological measuring devices. This massive expenditure of tax dollars for a production capability of three million units per shift per year raises serious doubts as to FEMA's stated intent to pilot-produce only one run of 20,000 dosimeters and 10,000 charging units.

I find it incredible that the federal agency responsible for managing emergencies is getting involved in the research, development and production of dosimeters. As one Ph.D. engineer working for the Government put it, there is nothing so unique or technologically challenging about dosimeters and charging units that the Government should feel compelled to enter into a research and development project. In addition, he seriously questioned whether FEMA knows what it is getting into by its decision to go ahead with in-house production engineering. The operation of a production facility would seem to be well beyond the scope of FEMA's responsibility and authority. If there are problems with privately manufactured dosimeters, logic would have it that the Government would work with the private manufacturers to solve the problems. When the Government has problems with the F14 or even copying machines, it works with the private sector to remedy the problem. It does not open a production facility in an effort to prove it can make F14's or copying machines better than the private sector.

We believe that FEMA intends to manufacture its entire requirement of dosimeters and chargers and to offer its capability for manufacturing dosimeters for the Army, Navy and other governmental entities which may have need of them. Having invested $3 million in this "production engineering" project, having a $1.6 million in a ten-year lease, and having trained production personnel and established production for 3 million dosimeters per year, FEMA will then be in a position to ask Congress for procurement of dosimeters to be produced in-house at Rolla. Having already made this large investment to reach this capability, it would be claimed as a waste not to use it to manufacture dosimeters. Since the private sector at that point would have to invest funds in some additional equipment and incur other costs in order to produce the "new" FEMA design dosimeter, the private sector probably would not be able to match FEMA's cost, which at that point would not include additional costs the private sector might have to invest. Having already sunk $4.6 million into creating this manufacturing capability, the Congress would be asked to find that it has only one fiscally responsible choice, to support in-house manufacture of the dosimeters.

The D.C.A. is a small business which manufactures dosimeters in Cincinnati, Ohio. It has an impressive list of customers which purchase D.C.A. manufactured dosimeters and a list of such current customers is attached hereto as Exhibit 2. D.C.A. believes that it can conduct the production engineering developmental work and produce the 20,000 dosimeters and 10,000 chargers at approximately one-third to one-half of the $4.6 million investment anticipated by FEMA. D.C.A. believes that the use of its facility, much of its current equipment, its trained production personnel and experienced production engineers would result in substantial cost savings on this project. The exact amount of cost savings would depend, of course, upon the contract requirements of FEMA. The real world production experience of D.C.A. would be invaluable to FEMA in developing the production engineering design. All of the information and technology developed under a FEMA contract with D.C.A. would belong to FEMA and would be open to the public domain at FEMA's disrection. FEMA professionals would be able to participate in the work at D.C.A.'s plant to the full extent that they could at a Government plant. It seems ludicrous that a government agency that has never mass-produced a dosimeter would not take advantage of the economies and efficiencies of a private sector company that specializes in what FEMA is attempting to achieve.

FEMA made this decision to do the production engineering in-house without any consultation with or requests for bids from the private sector producers of dosimeters. If it had consulted and made such requests, I believe the decision to go in-house would not have been made. FEMA has not developed specifications or an overall cost target for its production. There is substantial risk of major cost overruns in their absence. It made this decision without doing the required OMB Circular A-76 cost comparison which is required in order to determine whether or not it would be economically more feasible to do this work in the private sector than in-house.

OMB Circular A-76 states that:

> In a domestic free enterprise economic system, the Government should not compete with its citizens. The private enterprise system, characterized by individual freedom and initiative, is the primary source of national economic strength. In recognition of this principle, it has been and continues to be the general policy of the Government to rely on competitive private enterprise to supply the products and services it needs... The Government's business is not to be in business. Where private sources are available, they should be looked to first to provide the commercial or industrial goods and services needed by the Government to act on the public's behalf.... When private performance is feasible and no overriding factors require in-house performance, the American people deserve and expect the most economical performance and, therefore, rigorous comparison of contract costs versus in-house costs which should be used, when appropriate, to decide how the work will be done.... Certain functions are inherently governmental in nature, being so intimately related to the public interest as to mandate performance by Federal employees.... "Governmental function" is a function which must be performed in-house due to a special relationship in executing governmental responsibilities. Such governmental functions can fall into several categories:
>
>> (3) in-house core capabilities in the area of research, development, and testing, needed for technical analysis and evaluation and technology base management and maintenance. However, requirements for such services beyond the core capability which has been established and justified by the agency are not considered governmental functions."

FEMA claims that it is not subject to A-76 in this matter because it is research and development. We would like to know why a production capability of 30 million dosimeters would be considered research and development? Certainly, a much smaller investment in capital equipment and plant could achieve the alleged production engineering results for 20,000 dosimeters. More importantly, my client already has the trained employees, production knowledge, and much of the machinery and equipment which will be required for this project. If this work were being done through my client or another private company (and at least one other such facility exists in the U.S.), we believe greater cost savings could be achieved by avoiding the purchase of much of the equipment, the cost of training new personnel in the techniques of producing a dosimeter, and the payment of $1.6 million in rent.

FEMA states that the decision to work in-house was not based on cost factors but was based on the need to conduct development where the government could "control the collection of data on all associated processes," "where there can be intense scrutiny of each manufacturing step to identify and solve problems as an integral and necessary part of development." There is absolutely no reason why FEMA cannot accomplish these purposes in a private sector plant at a lower cost. More importantly, FEMA would have the advantage of experienced private sector personnel and engineers to assist it in solving the problems it anticipates in preparing an adequate set of specifications to meet large scale procurement. It is important to note that in the original decision of the Defense Civil Preparedness Agency (DCPA) to go forward with research and development of a low-cost dosimeter in 1976, the stated intention was to contract out the pilot production phase to the private sector.

It is also important to note that in the early 1960's, the Federal Government contracted with a division of the Bendix Corporation to do research and development on dosimeters. The Bendix work has been the basis upon which FEMA conducted additional research and development in-house to produce its current design. In conjunction with the current in-house FEMA research, a part of that research was contracted out to Monsanto to develop a unique plastic which can be used in the FEMA designed dosimeter. If research and development on dosimeters was not a governmental function core capability in the Bendix research, the Monsanto research, and the 1976 DCPA decision to do this same production engineering in the private sector, by what magic has production engineering now been transformed into "core capability" research which must be done in-house? Since it was the conclusion of DCPA that production engineering on dosimeters was not "core capability" research and development, there could be no more binding precedent for FEMA (successor to DCPA) in its current decision. Production engineering on dosimeters is clearly not subject to the "core capability" research and development exception to A-76. Therefore, FEMA must comply with the A-76 cost comparison analysis.

In further response to Mr. Mealy's memorandum and specifically the section on "Technical and Experience Factors," D.C.A. believes it is very speculative whether the new FEMA design overcomes any or all of the design faults FEMA believes to be in old dosimeters. FEMA has built a total of 306 dosimeters, 300 low range and 6 high range. In the low range dosimeters, it found fault with the design and has since built 20 additional low range dosimeters which, according to their own admission, were built by skilled craftsman operating under lab conditions. Even these 20, which were built to correct some of the design faults, do not meet the specifications which current "old" designed dosimeters will meet. The written test data on the FEMA dosimeters was not available to D.C.A. during its visit to the FEMA lab. Would such records reveal questions regarding the design or the test methods? In the last paragraph in this section, he discusses the charger and some how ties that to the dosimeter production facility. In fact the charger assembly is relatively simple and straight forward. It certainly does not require such close Government supervision nor does it require development of production techniques since it is similar to commercially available devices. Why is production engineering even being done on charging units? Has FEMA or the Navy had any difficulty with chargers?

In Mr. Mealy's section on "Performance Requirements," he describes the reliability required after many years of storage and temperature and humidity changes. Since this is a most important characteristic, why has no testing been done on humidity and heat effects on the low-cost design? He further describes how a dosimeter is to be used in a shelter and alludes to problems with electrical leakage and rough handling. The problem of rough handling and electric leakage have not been solved by the low-cost design, as yet. FEMA has been trying to prove the rough handling capability of the design by throwing several samples of the design against the wall. However, from the time spent at the FEMA lab in Washington, D.C.A. has learned that electrical leakage is a problem in this particular design. We do not expect this to be solved very quickly although it is a solvable problem. The second problem is simply false. The design does not minimize the chance of electrical leakage and in fact, as above, we know they have some problems. In the third paragraph, Mr. Mealy is addressing a much tighter specification than one which is now being manufactured. FEMA should elaborate on the particular specifications to which these dosimeters are being built and which ones they are capable of meeting.

The section on "Reliable Sources of Supply" suggests a requirement, which would be displayed in either a request for quote, a request for bid, specifications, or a cost target, none of which are available today. The second sentence discusses the designs currently being manufactured. The FEMA low-cost design is essentially the same design used in the early 1960's. I'm not sure why the dates are relevant. New is not always better. Any control which FEMA could have or the Government could have at a pilot production plant run by FEMA could also be held at any other facility, including D.C.A.

The section on "Civil Defense Experience in Dosimeter Procurement" is a dissertation on the poor Government performance specifications of the past. The discussion of the 1962 lot of dosimeters from a contract with an unidentified source seems to reflect poor procurement practice rather than anything else. Why were those dosimeters not returned to the vendor as being defective? In fact, the balance of the dissertation under this heading could have the same questions asked, that is: Why were faulty, defective dosimeters accepted by the Government?

Mr. Mealy's memorandum has questioned the capability of the private sector contractors to conduct this work based on alleged "Navy Experience" in the past with dosimeters produced by those manufacturers. For example, he discusses three contracts which D.C.A. has had with the Navy and alleges a 10% and 9% defective rate. My client's records under those contracts indicate a 0% and .8% defective rate. On the first contract D.C.A. has no record of any returns even though there was a one-year warranty in the contract. But assuming FEMA's number for defects, it still would indicate a maximum of 1.2% defective rate on 6,000 dosimeters shipped. On the other contract D.C.A. replaced on warranty 331 returned dosimeters out of 40,000 dosimeters shipped (.8% returned and replaced). While the third contract is of such an age that D.C.A. no longer has any records on it, we suggest that the numbers cited by Mr. Mealy are as inaccurate as those on the other two contracts. The facts do not support Mr. Mealy's assertions as to the quality of the D.C.A.'s work. D.C.A. cannot speak for, nor be held responsible for the performance of its competitors.

Regarding the repair of dosimeters in the FEMA test facility, the question arises why the Navy uses that facility and why they haven't gone out on bid to have these repaired in the private sector? How much money is being spent by the Navy to repair these? It appears that only 20% of the Navy's total procurement has been delivered to the test facility for repair. How does this compare with other serviceable merchandise procured by the Navy and over what time frame?

Regarding the Qualified Products List (Q.P.L.), D.C.A. in fact delivered to FEMA one lot of high range meters for QPL testing and in fact these meters did not pass. However, D.C.A. is in the process of building and testing high range dosimeters which will pass this qualified products testing. On the other hand, D.C.A. also submitted low range dosimeters for testing which passed the QPL testing for that range. I question why Mr. Mealy emphasizes that D.C.A. did not qualify a high range dosimeter but fails to recognize that D.C.A. did qualify its low-range dosimeter. D.C.A. suspects that the new FEMA design would not qualify under the tests for either range. While the last paragraph in this section discusses "main problems" which D.C.A. has had during QPL tests, it does not state that the FEMA design has resolved those problems.

In the section on "Test Objectives to be Addressed in Pilot Production" Mr. Mealy admits that the problems which the new FEMA design attempts to address must be proven in pilot production. He does not anywhere in this section discuss why he believes this production engineering needs to be done in a Government facility and why private industry cannot do the same or a better job. He also does not address cost considerations of doing this work in the private sector versus the Government. I don't know that any response is required to how much testing and how much design is still left to be done on the FEMA design dosimeter. However, Mr. Mealey devotes two pages to questions that remain to be answered. It would appear from the extent of the tests to be run and the questions to be answered that the design is far from a panacea or even a good remedy to FEMA's perceived problems.

Unless a contract is let to the private sector with specific details on how to manufacture a dosimeter, the responsibility for producing "good" dosimeters which meet FEMA's needs would be impossible. Does FEMA intend to deliver to any vendor the designs, the tooling, the material, the production designs, the production capability, process sheets and test methods so that they can produce a dosimeter equivalent to FEMA's standards? Does FEMA intend to guarantee that following their designs and procedures will produce a dosimeter which meets their specifications? If the answers to these are yes, then the only question is why do they have to be developed in a Government facility? If the answer to these is no, then why is FEMA doing it? The only logical conclusion can be that FEMA intends to produce dosimeters in the FEMA facility in the future.

The section on "Rationale for Using Government Facilities" discusses the importance of doing this development in a Government facility because the Government needs to "control the collection of data on all associated processes." However, apparently a private company, selected without competitive bidding, will be running and managing the FEMA facility in Rolla, North Dakota. This is inconsistent. This is inconsistent. Mr. Mealy states that its "decision reflects the fact that its laboratory experience and the production experience available in the private sector are too uncertain and unproven to allow award of a good contract to assure the desired product." We believe that the facts prove that FEMA is completely wrong. In fact, it is FEMA whose design and production experience are too uncertain and unproven to be conducted in-house to assure the desired product. In fact, the FEMA production facility and not yet exist.

Another factor that FEMA states in its decision to use Government facilities is the "need to maintain levels of competency and expertise in precision manufacturing at the William Langer Jewel Bearing plant." We are informed that there at least one high level procurement officer doubts the competency and expertise at that plant. We can supply the name of that officer if necessary. In any event, it is irrelevant since the FEMA project will not be conducted in the William Langer Jewel Bearing plant but in a facility owned by the Rolla Development Corporation located somewhere in the vicinity of the William Langer Jewel Bearing plant.

We have recently learned that FEMA intends to contract with the Bulova Company to operate its Rolla plant. Bulova has never manufactured a dosimeter. On what basis does FEMA justify a sole source contract with Bulova? Why hasn't FEMA let his contract for public bid?

It has been the policy of the Federal Government to rely on private enterprise to provide commercial goods and services and not start or carry on any activity to provide a commercial product or service if the producer or service can be procured more economically in the private sector. OMB Circular A-76. FEMA cannot and did not attempt to justify its decision to go in-house on this project on a cost basis. The DCPA decision in 1976 should be a binding precedent that production engineering on dosimeters is not "core capability" research and development. This is buttressed by other FEMA and DCPA decisions to go to the private sector in the Bendix and Monsanto research. Therefore, FEMA cannot avoid compliance with A-76 cost comparison requirements by hiding behind the unfounded defense of "core capability." It cannot establish a reasonable basis for its conclusion that it can do the work required by this project better in-house than it can be done in the private sector. I have always believed that a Government agency can rarely do it as efficiently, economically, and effectively as the private sector can.

It seems to me that neither the facts nor rationale can justify categorizing this activity as calling for in-house performance by the Government. I urge that you require this work to be returned to the private sector before any further expenses are incurred by the taxpayers on this project.

Very truly yours,

Bob Taft

Robert Taft, Jr.

SUMMARY OF STATEMENT

Mr. TAFT. Mr. Chairman, in his weekly radio broadcast last Saturday, May 14, President Reagan hailed small business in the following words::

> Small firms account for nearly half of our jobs. They create some 60 percent of new jobs and they are on the cutting edge of innovation, providing products and ideas for the future.

I am appearing here today on behalf of a small business, Dosimeter Corp. of America, located in the Cincinnati, Ohio, area, engaged in the production of an item called a dosimeter. Today I want to point out to the committee the activities of FEMA which are at direct odds with the announcement of the administration and the Congress with regard to small business and in violation of procurement Circular A–76, which is designed to give protection to small business.

Briefly, the facts are as follows: The dosimeter is a radiation device for measuring radiation which FEMA plans to produce under a 7-year program in a total volume of 21 million units.

Initially, with the money proposed in this appropriations bill and already appropriated funds—$500,000 in 1981; $1.7 million in 1982, and $1.2 million estimated in 1983—FEMA intends to set itself up in the business of producing 20,000 dosimeters at a Government-leased plant in Rolla, N. Dak., under the guise that it is doing production engineering that amounts to reserach and development.

In addition to the above expenditures, FEMA expects to enter into a 10-year lease with rentals totaling $1.6 million. There seems to be some question with the Agency as to whether, indeed, the rental figures are included in the figures for the 3 years that I have just given and projected into their future expenditures.

The only thing I would say about that is that attached to our testimony is a copy of the contract between FEMA and another Government agency which shows the expenditures involved and does not show any of that attributed to a lease, so that I am not sure of the accuracy of the statements now being made by FEMA in this regard.

It may be true, or it may not be; I have no knowledge.

The facility planned will have a production capability that could exceed the total planned production of 21 million units, although FEMA claims that it is only entering into the contracts and getting the facilities ready for the production engineering phase and that their production will be limited to 20,000 dosimeters and 10,000 charges for those dosimeters. Plant costs per item, if you take the figures that I have just given you, could go as high as $250 apiece, compared to the current market prices of around $70 which our client charges generally in the market for similar type items.

These plans have been entered into by FEMA without observing any of the safeguards to protect small business, without competitive bidding, without specifications for the product involved, without trained personnel ready to produce the product involved, and without any particular approval of the plan by the Congress.

As has been indicated, the requirements of Circular A–76 have not been observed. Private sources, including Dosimeter Corp. of America, are available and ready to perform the production engineering and production and seek to bid competitively for them.

However, if FEMA is allowed to proceed to build the Government facility and put it in operation, it is extremely unlikely that private sources will be able to bid competitively against such a plant in the future when they get to the production runs.

The capability of the private sector to perform the production engineering work proposed is testified to by the fact that the initial research and development of the dosimeter was originally contracted out to Bendix Corp., and additional research to develop a plastic suitable for use in dosimeters was contracted out to Monsanto Corp.

A decision was made by FEMA's predecessor in 1976 to proceed through production engineering by the private sector. FEMA apparently reversed this decision sometime, I guess, within the last 3 years without any new basis that we know of for doing so.

There appears to be no reason why production engineering, including in-plant supervision and controls that FEMA has mentioned as being desirable, cannot be performed by a private contractor in already existing private facilities with already trained work forces and at the far lower cost and probably with superior results.

In view of these facts, we ask that this committee reduce the appropriation for FEMA by the amounts planned to be used for the Rolla plant development, machinery, and the 10-year lease commitment; and that FEMA be prohibited from using funds for these purposes and be directed to contract out the production and engineering in question.

Failure of this committee to act will authorize one of what I think is the most outrageous bureaucratic boondoggle victories over small business to surface in recent years. If the committee does not feel justified in taking in these steps, the very least that could be done would be to direct FEMA to put out for bidding any direct contract that may be considered for production engineering, either at Rolla or elsewhere, and require any future production to be placed in the private sector.

The production engineering is apparently intended at this time to be single source to the plant in Rolla, N. Dak., near a plant that is laid out currently for jewel bearings by the Bulova Watch Co. We don't know whether Bulova actually has a contract for this work, but apparently it is intended to be single source, if we deduct correctly from what the Agency has told us at this time.

Mr. Chairman, that completes the summary of my testimony, and we hope that the committee will take it into consideration.

Senator GARN. The Senator, as you know, we discussed this before, and you are probably aware that on April 28, FEMA was before the subcommittee, and I spoke to them then about the dosimeter issue.

I think my instructions to FEMA were very clear: That although I did not object to them developing prototype instruments, I simply would not support a production program unless it were competitively bid.

I also wrote to Senator Andrews about the issue and was assured that there would be no funds beyond some in fiscal 1985, so that would be the end of it, and then that after that request, they would be competitively bid.

So I hope that is of help to you.

Mr. TAFT. We appreciate it, Mr. Chairman, very much indeed, and we realize the difficulties the committee has in trying to step in in the middle of an operation on going as this one seems to be, but we trust that the commitments made at this time—and we are going to proceed to talk with the Agency ourselves and with some of the Senators on Armed Services, maybe, and try to pin down what is going on.

The Congress understands what is involved, which has not happened in the past.

Senator GARN. We appreciate it very much; we appreciate your coming.

Mr. TAFT. We appreciate it.

Senator GARN. The next witness is Mr. Harold A. Schaitberger, legislative director, International Association of Fire Fighters.

Is Mr. Schaitberger here?

It appears Mr. Schaitberger is not present. Without objection, his prepared statement will appear in the hearing record at this point.

[The statement follows:]

STATEMENT OF HAROLD A. SCHAITBERGER, LEGISLATIVE DIRECTOR, INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS, AFL-CIO-CLC

Mr. Chairman, members of the Subcommittee, I am Harold A. Schaitberger, Legislative Director for the International Association of Fire Fighters (IAFF), AFL-CIO-CLC, representing approximately 170,000 professional fire fighters throughout the United States and Canada. I am pleased to appear before you today to present the views of the IAFF on fiscal year 1984 appropriations for the U.S. Fire Administration (USFA).

Over the years, the IAFF has played an active role and taken a strong interest in the creation and development of the U.S. Fire Administration and its various programs. In 1969, when the Federal government first turned its attention to our serious national fire problem and appointed a National Commission on Fire Prevention and Control, then-IAFF President Howard McClennan was privileged to serve as its Vice-Chairman.

The Commission's findings at that time led to one conclusion, "that we needed Federal leadership and assistance to keep fire prevention and control abreast of modern demands on the fire services, if the magnitude of losses to fire, in life and property, experienced in the United States were to be reduced." In 1974, Congress responded to the Commission's findings and the crying national need by enacting the National Fire Prevention and Control Act, initiating a comprehensive Federal program administered through the U.S. Fire Administration and working in cooperation with and in support of State and local fire programs. The Act also called for the creation of a National Fire Academy for upgrading the capabilities of fire fighting professionals.

With the U.S. continuing to experience one of the highest rates of fire deaths and property losses among industrialized nations, the need for Federal focus and assistance remains as strong as ever. We are, therefore, in full support of the USFA's request for total funding of $14,720,000 in fiscal year 1984. We must stress, however, that this amount is the absolute minimum required for achieving any significant progress towards reducing our nation's fire losses.

The U.S. Fire Administration is divided into four program areas: fire policy and coordination, fire fighter health and safety, fire prevention and arson control, and fire data and analysis. The National Fire Academy seeks to advance the professional development of the fire services and other professionals engaged in fire prevention and control activities. We would like to take this opportunity to make several specific recommendations touching on a number of these areas.

Significant strides have been made since the opening of the National Fire Academy. The establishment of the Academy had long been one of the major goals of the IAFF. The Academy, with resident capacity of 300-500 students and space to accomodate conferences of up to 1,000 people, serves as a focal point for upgrading fire fighting capabilities throughout the country. Selected individuals representing fire fighters, fire chiefs and marshalls, code enforcement organizations, architects, arson detection units, and other fire-related professionals are being trained in the most advanced techniques of fire prevention and control. These experts will then share this information, passing their knowledge on to colleagues throughout the country.

The National Fire Academy is the only program of its kind, offering comprehensive training to all fire-related personnel. Only through such a program can we hope to make the major strides in the education and training of fire-related personnel needed to significantly reduce fire deaths, injuries and property losses in the United States. We would hope that the Subcommittee will continue to support this program and provide sufficient funds for its continued progress.

The IAFF is particularly supportive of the Academy's only higher education effort - the Open Learning Fire Service Program. This grant program provides fire fighters in all 50 states with the opportunity to earn a baccalaureate degree in fire administration and fire prevention technology. Fire fighters are able to learn at a distance from the college campus, while guided and assessed by faculty members. We believe that this program is a critical component for increasing the level of professionalism of fire service personnel.

The Open Learning Fire Service Program, through its consortium network of colleges and universities now has instructed over 3,300 fire service students in professional academic courses ranging from the administration and personnel management of fire departments, to disaster planning and the design of fire protection structures and systems. In a recent survey of students, 93 percent indicated that the college courses were helping them to become better fire professionals. We would like to point out that students registering at colleges for these courses do not receive any Federal subsidies for tuition. They are highly motivated and pay their own way.

The IAFF is very proud to be associated with the Open Learning Fire Service Program. It is a high quality, cost-effective approach that provides the only higher education Bachelor's degree opportunity available to all of the nation's fire fighters. Since this program offers a means to professional development available nowhere else, we are very concerned that the program be maintained.

Approximately $300,000 will be required in fiscal year 1984 to direct the consortium of colleges and universities offering the program, and to evaluate and revise the twelve core courses being offered. We strongly recommend that the Subcommittee address this unique program in any of its deliberations, and we hope that you would see fit to specifically provide the requested funds. The benefits of this education program greatly exceed the small sum required to continue the development of the Open Learning Program.

In our view, fire fighter health and safety is one of the most important programmatic areas within the U.S. Fire Administration. As you are aware, fire fighting is among the nation's most hazardous occupations, with one of the highest line-of-duty death, injury and illness rates. The Firefighters' Integrated Response Equipment System Project (Project FIRES), which had been initiated in cooperation with NASA, is an example of some progress that has already been made in the safety and health area. But we must also stress the absolute necessity of funding, not only for the continuation, but also for the expansion of the USFA's efforts; if the unacceptable death, injury and illness rates among fire fighters are to be reduced.

The work of Project FIRES, which has developed improved and lighter-weight personal protective clothing and equipment for the fire services, must be continued and expanded. Research efforts toward developing a model breathing apparatus should be advanced, directing efforts toward the development of lighter, longer-lasting apparatus and improvement of audio-visual capabilities and the fit of masks. The continuation of the joint USFA/ Bureau of Mines project to develop and test close-circuit breathing apparatus is especially important. Further, research and development of specialized protective clothing to deal with exposures to toxic substances and chemicals is also needed.

Another program within the safety and health division of the U.S. Fire Administration, in which the IAFF takes a particular interest,is apprenticeship training. This program, managed by the IAFF in cooperation with the International Association of Fire Chiefs, provides support for the development and tracking of basic fire training and related efforts and works in cooperation with municipal governments. The program is vital to the fire services, and we ask that the Subcommittee support its continuation and funding.

While we have emphasized only some of the programs within the U.S. Fire Administration and the National Fire Academy in our testimony today, we are not suggesting a lack of support for the continuation of its various other fire prevention and control efforts. As we have stated, we are in overall support of the U.S. Fire Administration's request for $14,720,000 for fiscal year 1984, and we would hope that the Subcommittee would provide adequate funding to assure the continuation of the U.S. Fire Administration and to assure that its essential programs be maintained.

We would now like to bring your attention to another vital fire program -- one that does not fall within the jurisdiction of this Subcommittee, but which we feel you should be aware of and provide any approrpiate assistance to. The program I am referring to is the Center for Fire Research (CFR) within the Department of Commerce. As you may recall, during last year's consideration of USFA appropriations, the Reagan Administration's original budget proposals called for the elimination of the USFA in fiscal year 1983. The Congress rejected this elimination and gave its full support to the continuation and funding of the USFA.

This year, the Reagan Administration is once again seeking to severely cut back the fire prevention and control efforts of the Federal government by recommending the elimination of the CFR in fiscal year 1984. The Center carries out some of the most sophisticated research in fire prevention and control methods in the country. Advanced fire research is essential if our nation is to improve fire safety codes, standards and regulations; and the budget savings that the elimination of CFR provide would be offset many times over. The CFR saves precious Federal and non-Federal resources by advancing fire and safety techniques that can minimize, and in some instances control, fire damage through the development of fire and building codes, and that can save lives that would otherwise be lost in fire-related incidents. The consequences of eliminating the CFR would be grim.

Two million dollars in research grants to leading unviersities and laboratories would be lost. Basic knowledge of how flames spread, the role of soot formation in fire damage, and how to design safer materials would cease to grow. This would come at a time when fire research is making dramatic improvements through the use of modern technology. Computer based fire simulators that would be used by building designers, code officials, fire service officers and fire fighters can be used to significantly decrease losses in life and property. Halting the CFR's work at this time threatens this progress. We, therefore, request that the Subcommittee members take any steps possible to see that the work of the CFR is funded and continued.

I would like to thank the Subcommittee for this opportunity to present our views on behalf of our members.

STATEMENT OF CHIEF THOMAS HAWKINS, ARLINGTON COUNTY FIRE DEPARTMENT, ON BEHALF OF INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

Senator GARN. Next, we will go to Chief Thomas Hawkins from the Arlington County Fire Department on behalf of the International Association of Fire Chiefs.

Mr. HAWKINS. Thank you, Senator.

On behalf of Chief Charles Kamprad, the president of the International Association of Fire Chiefs and the Nation's fire chief officers, I appear before you in support of the U.S. Fire Administration's budget and funding request for the upcoming year, fire chiefs who are responsible for the directing of managing of local government's fire prevention and control activities, as well as disaster preparedness responses.

I come to you today speaking as a practicing fire chief who can attest to the good being done through the USFA. For that reason, I would like to submit Chief Kamprad's written testimony for the record.

Senator GARN. Without objection, it will appear at the close of your oral presentation.

Mr. HAWKINS. The International Association of Fire Chiefs support the overall FEMA budget. We especially would like to emphasize that part of the budget which is directly related to the U.S. Fire Administration and the National Fire Academy.

The major points in the U.S. Fire Administration's budget: R–1, "Firefighter health and safety," which is an issue that I don't think any of us, knowing the death and injury rate that firefighters have in this country, can talk against.

The fire prevention and arson control section of it, again, the arson problem has not been solved, and we do need a Federal focus to continue leading our efforts in that area. Fire data and collection analysis, we support that because today we really don't have any very good hands-on fire program and we need, again, a central focal point to find out where the fires are occurring and how we can best prevent them.

A fourth area is that of fire policy and coordination.

The fire service, many people don't realize, is probably involved in every disaster that occurs in this country in some way or another. We support the funding of FEMA, as I said earlier, but we do not support jeopardizing the U.S. Fire Administration's funding for FEMA itself.

We would rather see USFA and the National Fire Academy's budget be funded at the fullest degree possible.

Lately, FEMA has come up with an integrated emergency management system, IEMS, and I would like to add support to that philosophy, because it is now allowing local governments to be involved in planning for all types of disasters where before, most of our efforts were toward the nuclear event and any fallouts to local disasters.

I am speaking now of an opportunity to plan across the board for evacuation, resource utilization, and many other aspects of disaster management.

I personally participated in the Air Florida crash of January a year-and-a-half ago, being the first command officer on the scene of that event.

I can attest to what it means to a fire department to be involved in disaster management.

The U.S. Fire Administration is currently without an Administrator. The International Association of Fire Chiefs supports that that position be filled with a qualified candidate and, hopefully, be filled as soon as possible.

General Girida and Associate Director Jeff Bella have done an excellent job for the fire service, and we continue their support. One thing we ask of the general is that he continue the discussions between FEMA and the Nation's fire service in those matters which affect the local fire department.

We are, I believe, the major disaster response agencies, and I think it is imperative that FEMA work with the local fire departments to provide the best fire service possible.

I am available to answer any questions that you may have, sir.

Senator GARN. Thank you, very much.

In your statement you list a series of possible add-ons to the fiscal year 1984 budget totaling $3.850 million.

Which of those 12 activities do you consider to be of the highest priority?

Mr. HAWKINS. My testimony alluded to the fact that the fire fighter health and safety was a vital issue to us. Today, let me just, if I may, tell you a little story.

Three years ago, Arlington County bought a fire helmet. That helmet was a leather helmet. I think it was originally designed in 1820. Today, I don't think the technology has come much further, and we need to have some support to get better protective clothing and materials that firefighters can use to protect themselves to reduce the death and injury rate that we have in the country.

Senator GARN. Thank you, very much.

We appreciate your coming today.

Mr. HAWKINS. Thank you.

[The statement follows:]

STATEMENT OF CHIEF CHARLES KAMPRAD, PRESIDENT, INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

The International Association of Fire Chiefs (IAFC) is a professional association representing the nation's career and volunteer fire chiefs who are responsible for directing local governments' fire prevention and control activities, emergency medical services and emergency response to disasters. The IAFC supports continued appropriation of the funds in the amount of $14,720,000 for the Federal Emergency Management Agency to carry out the Federal Fire Prevention and Control Act of 1974.

Organized in 1873, the International Association of Fire Chiefs long has recognized that the fire problem can overwhelm the capabilities of local fire departments. The history of tragic fires and disasters has convinced our members that a collective and cooperative effort on the part of local, state and federal governments is necessary to combat the fire problem.

At issue today is the federal commitment to fire protection. The nation's fire chiefs, the entire fire service community and the United States Congress have worked for many years to create and maintain a federal focus on the nation's fire problem. Both the U.S. Fire Administration and the National Fire Academy have provided leadership to meet these needs. These important federal agencies deserve to be reappropriated.

The nation's fire problem continues to be serious and deserves federal involvement. The following points should be considered when identifying an appropriate federal fire focus:

- o The nation's fire problem demands a separate and identifiable agency, within the federal government, which will commit its total resources to assisting the existing fire protection community to serve the public needs and interest on a day-to-day basis.

- The public interest can be served best only if unwanted fire is recognized as a continually occurring problem. The day-to-day aspect of this problem, its magnitude and its effects are vastly different from the problem of intermittent disasters.

- The national focus on fire must deal directly with, and be responsive to, the state and local fire protection community.

- The fire technology programs must be continued with concentration on solving current problems. An example of a project of vital importance and promise that already has been initiated is the development of newer and safer protective clothing for fire fighters.

- The U.S. Fire Administration and the National Fire Academy must not be subordinated to any other part of FEMA's programs. The fire programs should receive the highest degree of priority in keeping with the continuing magnitude of the fire problem. Through the academy and its system, new and transferrable technology, results of research and sound practices can be spread nationwide.

- There is a potential decrease of emphasis on fire safety and prevention with respect to the small fire incident which can occur in a disaster-oriented agency such as FEMA. The home is cumulatively the most dangerous to

> human life. Residential fires claim approximately 6,000 persons annually. These fires are not spectacular, and often property losses are low. Nevertheless, it is the homeowner and individual family that suffer the most often from fire. Private residences are at the heart of the fire problem. The priorities needed here are vastly different from those required for a potential hurricane or earthquake, and these must be kept in proper perspective.

The IAFC has been engaged for many years in activities to define clearly the legitimate federal role in local fire protection. The U.S. Fire Administration (USFA) was created by Congress at the urging of the America fire service to provide a critical, coordinating cost-effective linkage among all federal, state, local, and private agencies and organizations responsible for fire prevention and control. This is still, and should continue to be, the primary function of the USFA.

The members of the IAFC, therefore, believe that the U.S. Fire Administration and the National Fire Academy should remain a major and distinct element of the Federal Emergency Management Agency.

Since the creation of the U.S. Fire Administration, the IAFC has had an opportunity to work closely with the fire administration and the National Fire Academy. This relationship has been one of mutual support for the benefit of the public and the fire service. We believe it is essential that a dialogue be maintained among the fire service and the USFA and FEMA.

Members of the IAFC have participated in meetings with FEMA staff to allocate effectively the resources of the U.S. Fire Administration. Consequently, the IAFC supports the four program areas identified by the U.S. Fire Administration:

1. Fire Fighter Health and Safety;
2. Fire Prevention and Arson Control;
3. Fire Data and Analysis; and
4. Fire Policy and Coordination.

The initiatives envisioned under the Fire Policy and Coordination Office will greatly assist fire department officers to manage more effectively. An improved data collection and analysis effort will provide important fire loss information and experience to local fire departments. This is the type of federal activity that can have a positive impact at the local level. Death and injuries suffered by the nation's fire fighters continue to be the highest of any occupation. Continued research into the development of fire fighter protection equipment and breathing apparatus is critical. The Fire Fighter's Health and Safety Office of the U.S. Fire Administration will provide resources for physical fitness programs, procedures to assist emergency personnel to develop diagnostic protocols for fire-related injuries and the management of safety procedures used in fire fighting.

Arson continues to present a severe threat to the nation's cities and rural areas. Death, injury and property loss from arson are an everyday occurrance in our society. Many fire chiefs state that arson fires represent 25% of the reported fires in their communities. The fire administration office of fire prevention and arson control has our wholehearted support.

In addition, to anti-arson measures, the fire prevention office will continue to examine fire and building codes, sprinkler systems and smoke detectors for residential properties. The IAFC considers this activity to be important in our attempt to provide safe occupancy for our citizens.

The Office of Fire Data Analysis should be considered as the basis of all of FEMA's activities. Accurate and reliable data is absolutely critical in order to design effective countermeasures to mitigate the fire problem. Data relating to fire fighter death and injury can be used to develop effective safety measures for fire fighting. Efforts to reduce death and injury to the nation's fire fighters should be a top priority for the U.S Fire Administration.

The IAFC believes the programs identified by the fire administration will provide useful products and services to assist the nation's fire service to reduce death, injury and property loss from fire.

The National Fire Academy continues to provide quality outreach and resident education and training for the fire service. The IAFC supports the executive development curriculum and the specialized training programs. Our only concern is that the demand for these courses far exceeds the current delivery resources. We believe that the current program initiative of the U.S. Fire Administration and the National Fire Academy could be increased if adequate financial resources were available.

On May 4, 1973, the National Commission on Fire Prevention and Control released its report, America Burning. This report was based on approximately two years of effort by fire service professionals, public management officials, the media and Members of Congress. I believe that the findings remain valid and the recommendations sound. This report continues to provide a blueprint to reduce the nation's fire problem.

In light of the important programs, training and research provided by the U.S. Fire Administration and the National Fire Academy, the members of the International Association of Fire Chiefs support the appropriation of funding in the amount of $14,720,000 to implement the Federal Fire Prevention and Control Act id 1974.

However, while the fire programs administered by the USFA and NFA are both valuable and cost effective, the lack of personnel and financial resources will limit the desired impact on the nation's fire problem. If additional funding is available, the IAFC believes the following areas are appropriate and could meet the needs for better fire protection.

A. National Fire Academy:

(1) Field Program Division 200 additional Field Programs and 8 Full-time Equivalent (FTE)	600,000
(2) Resident Program Division Conduct 1, two week program in each of 50 states and 8 FTE's	900,000
(3) Conduct 6 National Teleconferences on fire	300,000
	1,800,000

B. United States Fire Administration:

(1) Firefighter Health & Safety Division USFA	
* Toxic environment detection device for firefighters	250,000
* Firefighter Health & Safety program development and delivery through NFA	300,000
* Research & Development and data collection activity in the area of ropes, escape devices, escape breathing apparatus, descent devices	300,000
* 5 FTE's	250,000
(2) Fire prevention and arson control implementation of fire safety and protection program including high rise, smoke detectors and residential sprinklers and 1 FTE	500,000
(3) Emergency Medical Services (EMS) Program:	300,000
* Provide administrative and technical support for the development and implementation of basic and advanced life support systems in fire departments.	

- Provide an EMS resource center for fire department administrators and EMS system managers

- Provide EMS management courses through the NFA

* 3 FTE's	150,000
	2,050,000
Total Funding Level:	3,850,000

On be half of the International Association of Fire Chiefs I thank you for the opportunity to present testimony.

ADDENDUM

The program plan, endorsed by the International Association of Fire Chiefs includes a number of priorities and programs for each office within the U.S. Fire Administration:

OFFICE OF FIRE POLICY AND COORDINATION

Priorities for this office include overseeing the management and administrative activities of the Fire Administration and conducting programs which impact on fire and rescue service management practices.

Initiative for FY'83 include:

Improvement of NFIRS -- The aim of this project is to determine from the users' perspective, how to improve the National Fire Incident Reporting System (NFIRS) and how to make data collected through the system more accessible and useable at the local level.

Review of Fire Administration Historical Accomplishments -- A review will be made of Fire Administration accomplishments in terms of carrying out mandates of the National Fire Prevention and Control Act of 1974 as amended. Purpose of this review is to ensure programs undertaken by the Fire Administration in the future follow through in meeting mandates of the Public Law without duplicating work already done. In addition, this review will serve as the basis for recommendations for updating language in the Public Law.

Public/Private Sector Partnerships -- The Fire Administration will examine and document esisting public sector/private industry partnerships to address fire prevention-related problems which can serve as models for similar activities in the future.

Regional Fire Libraries -- The Fire Administration will update, and expand where feasible, fire-related information materials available through FEMA's regional offices.

Long-Range Plan -- A new 5-year plan for the Fire Administration will be developed.

OFFICE OF FIREFIGHTER HEALTH AND SAFETY

Priorities for fire fighter health and safety include assisting in the development of improved protective clothing and equipment, establishing preventive programs, and improving diagnostic and immediate care procedures for fire victims.

Ongoing programs for FY 1983 are:

Apprenticeship Training -- Managed by the International Association of Fire Fighters, in cooperation with the International Association of Fire Chiefs, this program is a continuation of support for development and tracking of basic fire training and related work in cooperation with municipal governments.

Project FIRES -- Through grants to the International Association of Fire Fighters and to 14 cities across the United States, this project is a continuation of research, development and testing of an improved turn-out suit for structural fire fighting. During FY 1983, a model suit is being field tested by firefighters on the job. Design deficiencies identified by users in these tests will be corrected and incoporated into the prototype for a second series of field tests. Data from the final field tests will be analyzed and published.

Low Profile Breathing Apparatus -- The Fire Administration will continue to work with the U.S. Bureau of Mines and U.S. Divers Corporation in the research and development of a long-duration (2 hour), positive-pressure, mixed-gas system. Efforts are being directed at improving design and making the units more accessible to the fire service by reducing costs. It is projected that certification of the prototype by the National Institute for Occupational Safety and Health (NIOSH) can be accomplished during FY '83.

New initiatives for FY 1983 include:

Fire Injury Diagnostic Procedures -- This project will begin with a voluntary data collection effort from emergency room medical personnel on the current diagnostic protocols relating to fire injuries. From this data, the Fire Administration hopes to develop for emergency medical personnel standard protocols for the proper diagnosis of fire-related injuries.

Fire Fighting Tools and Equipment Research and Development -- This initiative is aimed at identifying innovative tools and equipment applicable to fire fighting, modifying or improving on designs where appropriate and transferring that technology to departments across the country.

Fire Service Safety Officer Guide and Manual -- As a resource to fire departments creating the position of Fire Safety Officer, the Fire Administrations will codify work by a variety of organizations covering applicable standards, references sources and suggested practices.

OFFICE OF FIRE PREVENTION AND ARSON CONTROL

Priorities for this area include developing a pro-active program for fire safety codes and improving arson information management.

Ongoing programs are:

Arson Information Management Systems(AIMS) -- AIMS is an ongoing information system providing for the exchange of economic, social, and criminal justice information among law enforcemnt agencies, investors, bankers, and state and local anti-arson groups. During this fiscal year, USFA plans to determine whether state-of-the-art data management and infomration processing technology are being used by AIMS. An evaluation component will be integrated into the system to analyze the system's effectiveness. A specific city will be selected for study and development of a model program.

Juvenile Firesetter Treatment Program -- A number of fire departments have been conducting research to determine the effectiveness of training firefighters as volunteer counselors to reduce juvenile arson and firesetting. To date, data have been gathered on age groups up to 7 and from 7-15. Focus for FY'83 is on the 15-18 age group. (50% of all arson arrests are of juveniles 18 and under.)

An evaluation system will document and validate the program's effectiveness in reducing juvenile firesetting incidents.

Federal Arson Task Force -- The Federal Arson Task Force consists of representatives from various federal agencies with responsibilities or interests relating to arson. Chaired by FEMA, the Task Force serves as a forum for these agencies to exchange information on current and proposed programs.

In addition to regular bi-monthly meeting of the Task Force, the Fire Administration will host during the year short resident seminars at the National Emergency Training Center (NETC). Outside guest speakers and experts in the field will be invited to contribute to this exchange, providing a wider range of information and greater visibility to the effort.

New initiatives include:

Codes -- Much work still remains to be done in the area of code unification and standardization. The Fire Administration will work with organizations that develop fire standards and encourage more private sector involvement in code development and implementation. The aim of this project is to build on previous work related to code administration and enforcement done by the Fire Administration and to provide local officials with the knowledge and skills necessary to develop a strong, pro-active code process at the local level.

Residential Sprinkler Program -- This is a multi-year, phased project which builds on technical work already accomplished in cooperation with fire-related organizations and the private sector under Fire Administration sponsorship. Initiatives in this area will be aimed at encouraging an awareness on the part of the public and business and industry of the benefits of and technical improvements available in residential sprinklers and by promoting their adoption and use.

Smoke Detector Survey -- Information will be gathered to provide current statistics on smoke detectors in the U.S. including how many are in use, average costs, maintenance costs and problems, and their effectiveness and efficiency. In addition, an assessment of the effectiveness of existing local/state legislation mandating use of smoke detectors will be made.

Teleconferencing -- During 1983, the Fire Administration will explore opportunities for using teleconferencing as a means for transmitting and exchanging information on arson.

Arson Resource Center -- Through the Learning Resource Center at NETC, arson information will be compiled and disseminated on request. Data gathered by the Fire Administration to date will be supplemented by current information from other sources to provide a contralized national resource on the arson problem.

Arson Computer Project -- This project will introduce and encourage the application of microcomputers to the arson problem. Potential program directions include encouraging attendance at the Academy's new microcomputer courseand tracking innovative programs started at the local level as a result of this training. In addition, information will be gathered to evaluate the effectiveness of computers as a resource for addressing the arson problem.

Rural Arson Project -- This 3-phase study will identify the rural arson problem in the U.S.; suggest strategies to mitigate the problem; and measure the success of those strategies.

OFFICE OF FIRE DATA AND ANALYSIS

Priorities for this office are to ensure effective fire data collection on a national basis; to develop a data bank of timely, accurate and retrievable information; and to continue analysis of major and/or unusual fires.

Ongoing projects are designed to meet these objective:

NFIRS Grants -- To ensure the collection of accurate fire data throughout the United States, second-and third-year NFIRS grants to states/localities already commited to participation will continue. Overall, the NFIRS program will focus on upgrading the quality of current data and making it more readily available at the local level.

Technical Improvement and Support -- Working with FEMA's Office of Information Resources Management, the Fire Administration is continuing to collect, process and feed back to users data on the U.S. fire problem. Initiatives in this area will be aimed at developing more useable formats for data feedback, developing an improved version of the NFIRS data collection form and streamlining the data collection process.

In addition, the Fire Administration will continue providing technical support and training to users through the National Fire

Information Council (NFIC). Annual and regional workshops will provide users a forum to exchange information and to review innovations in data management and analysis.

Analysis of Major and Unusual Fires -- This project will continue in partnership with the National Fire Protection Association (NFPA). Case studies developed from these analyses will be used in an Advanced Fire Strategies course to be offered by the National Fire Academy.

New projects include:

Kerosene Heating Survey -- A national survey will be conducted to determine the magnitude of the fire problem related to use of portable kerosene heaters in the United States.

Special Studies and Reports -- The Fire Administration will continue to commission the conduct and publication of special studies and reports on current issues facing the fire and rescue service as well as the annual assessment of the magnitude of the U.S. fire problem.

Fire Fighter Death Survey -- A special study will be conducted to gather more accurate statistics on fire fighter deaths and their causes. Data will be analyzed to determine how these deaths can be prevented and/or reduced.

Senator GARN. Did Mr. Schaitberger arrive? [No response.]

SELECTIVE SERVICE SYSTEM

STATEMENT OF DAVID LANDAU, LEGISLATIVE COUNSEL, AMERICAN CIVIL LIBERTIES UNION

Senator GARN. We are happy you are early, Mr. Landau. You got to pick up a spot.

Mr. LANDAU. Thank you, Mr. Chairman.

I have a prepared statement which I would like entered into the record.

Senator GARN. It will be included in the record following your summation.

Mr. LANDAU. I will be brief, Mr. Chairman.

Once again, we are here to state our opposition to the draft legislation program which is being administered by the Selective Service System and ask this committee to refund that program.

We believe that the case for draft registration has now completely collapsed several months ago when the manpower task force report, the President's manpower task force report, was made available to the public, and we had been led to believe that it contained a recommendation to the President to continue with draft registration.

We found out by reading that report that it did not contain such a recommendation. It didn't make a recommendation at all. It presented four options to the President about possible mobilization and premobilization preparedness, two of which would have been within adequate range of the President's and the Defense Department's need in wartime but did not involve peacetime registration.

There was an option listed for the President in which forms would be prepositioned at Postal Service, people would be pretrained, computers would be available, and all this would be tested continually during peacetime, and that system would only have the 13-day difference with peacetime registration.

We believe because the training basis could not handle people and the numbers that would be coming in until at least 30 days after mobilization, that the option C in the President's task force report—that is, the mobilization option—was preferable.

Based on that evidence, we think that it is entirely reasonable to end registration. We are not asking that the selective service system be abolished or that emergency preparedness not be met.

Rather, we think that there is an alternative available in terms of this postmobilization option as outlined in the President's task force report which would be adequate to meet the Nation's needs but would not run into the hidden costs.

We know there are still a half-a-million young men who have not registered for the draft. Despite enforcement efforts, we have indictments; we have convictions; we have data matching programs; we have verfication programs, all this. And there is still a half-a-million men who have not registered.

Even more important is the GAO program about whether or not the names in the current program are current. The GAO study found that up to 30 percent of the names are out of date. People are not filling out change of address forms. If we had a national emergency tomorrow, we would probably have to register at the spot of induction, otherwise the deduction costs could be subject to court costs if the registration lists were not complete.

All of that leaves us to believe we can have a more efficient system in the postmobilization mode; that registration is not necessary, and we would ask this subcommittee not to refund the program. It costs approximately $7 million, we believe, out of the $22 million that the Selective Service has requested.

Thank you.

Senator GARN. Thank you, very much.

As you may or may not know, when draft registration came up under the Carter administration, I voted against it. I did so on the basis that I did not feel that it provided enough additional leadtime to make it worthwhile.

It made more sense to go to the point of classification for checking on people's physical health.

So it seemed to be too little, and I haven't necessarily changed my mind on that. Yet on the other side of the coin, do you feel that even with some errors in it, having a complete draft registry increases the fairness of the system? Since people are being required to register; are the percentages compiled and the changes more accurate?

Mr. LANDAU. It would be fair if it would be conducted at the time of the national emergency, because you have more compliance and more accurate information and your statistics would be better.

Obviously, as the Director of the Selective Service indicated, you need 98-percent accurate information in order to run a draft lottery for induction.

In some areas of the Nation, there is 98 or 99 percent compliance, but that 2 percent are out of the age for the eligible draft.

They are the 23- and 24-year-olds. If you look at the 19- and 20-year-olds, they have the change of address problem, and if it were conducted tomorrow, I think it would be a very unfair lottery system because so many people would be missing from it.

I think when you do conduct draft legislation mobilization, you could get over 95- to 98-percent compliance, because people will be motivated to come down and register.

One of the problems of the selective service system has nothing to do with the administration of the system. It is the rationale for the system. Young people still have a problem saying, "We are not at war; we are not about to go to war, at least apparently. There is no national emergency. Why should we have to register? And I will fight and I will register and I will be drafted if we are in a national emergency."

I hear that over and over and over again.

"But as long as there is no national emergency facing this country, it is hard for me to understand what they want me to register for." That grows out of the Vietnam conflict feelings about that. I think it is understandable.

I think if there were an actual emergency, you would have an overwhelming response to the system, and it would be fairer.

Senator GARN. But that brings up the question, then, with the Vietnam-type situation.

Do you consider that a national emergency?

Mr. LANDAU. We did not in the ACLU, and I think we think the benefits of not having a peacetime draft is you will have an unlimited reservoir of manpower available.

Had President Johnson not had to go to Congress and ask for a draft in 1963, it would have been more difficult, or if President Reagan wanted to conduct a war which was controversial, something not like World War I or II, with all countries being mobilized, he would have to go to Congress and ask for a draft because it would require manpower.

In doing that, that is another check on the Presidential war-making that Congress can exercise.

Senator GARN. Again, I voted against it, but on the other hand, whose is the proper definition of what a national emergency is?

Obviously, you don't consider that Vietnam was a national emergency.

Mr. LANDAU. Obviously, there are gray areas. I think Congress and the Constitution has the power to declare war. Principally, that is where the power should reside for war-making in the Congress. There are going to be cases. If the United States were under attack there would be a small time period where the President would have to exercise some emergency power before Congress could declare war. But in most cases, we believe that the war-making power does reside with the Congress of the United States.

We are strong supporters of the War Powers Resolution. We believe there have been instances in the past year where that has been violated since the Vietnam conflict where the President should have gone to Congress and reported to Congress that which might have involved U.S. facilities.

Senator GARN. Thank you, very much.

[The statement follows:]

STATEMENT OF DAVID LANDAU, LEGISLATIVE COUNSEL, AMERICAN CIVIL LIBERTIES UNION

We appreciate the opportunity to present our views on FY '84 funds for draft registration. The American Civil Liberties Union is a nationwide, non-parisan organization of over 275,000 members dedicated to the preservation and enhancement of the rights guaranteed under the Constitution.

The ACLU strongly opposes draft registration and urges that funds not be appropriated for it. Whatever one's views of the need for draft registration or national service, the current draft registration program cannot be justified. It results in little, if any, enhancement of emergency military mobilization capabilities and certainly is no better than other available options. Equally important, it results in the prosecution of those who stand firm in their religious and ethical beliefs which prohibit them from registering. It is unconscionable to make convicts of our most principled citizens for a program which, in the end, is symbolic.

The case for draft registration collapsed several months ago when the long suppressed Military Manpower Taskforce Report to the President was made public. We had been led to believe that the document contained a compelling national security basis for the President's decision to continue registration. It does not. In fact, it doesn't even make a recommendation. Rather, the document is an options paper which presented four possible mobilization plans, two of which are within adequate range of wartime mobilization requirements but do not involve peacetime registration.

The study group report states that the Selective Service could implement a system without active registration that would produce inductees during a time of war a mere fourteen days later than the current program. Under the Report's Option C, registration forms would be prepositioned at 250 regional postal centers and the people who would handle the forms, including those who transport the forms and key punch the data into computers would be pre-trained. Registration for the prime year of induction groups would be conducted over a two-day period similar to the successful registration programs in World War I and World War II.

The report acknowledges that "registration has no impact on the trained manpower available to the Department of Defense for the first three months of mobilization." Moreover, the report notes that training bases under current capabilities will be filled to capacity with volunteers in the early stages of mobilization, "if we experience a volunteer rate equal to 70% of the volunteer rate immediately following Pearl Harbor." Thus, the system might not be able to accept draftees for some time after mobilization. The fourteen days savings of the current registration program is, therefore, of little millitary significance.

For the ten months during which this report was kept secret, Administration officials painted a very different picture. In testimony before the House Subcommittee on Courts, Civil Liberties and the Administration of Justice last July, Selective Service Director Thomas K. Turnage said "the Taskforce came up with recommendations to the President that. . .by having registration in a pre-mobilization mode, you could save up to six or eight weeks." Without registration, he testified, emergency mobilization would be endangered.

The only support for this conclusion in the Report is that a well-functioning peacetime registration system does save six weeks over a Selective Service System in "deep freeze" as it was in 1975-1978. In other words, by comparing active registration to the worst alternative in the options paper, the Administration would have us believe that these are our only choices. We now know differently.

Director Turnage has also repeatedly stated that Option C would be a "high risk." A close examination of the report and other statements by the Department of Defense and Selective Service, however, discloses no factual basis for this assertion. Indeed, Assistant Secretary of Defense Lawrence Korb revealed several months ago on a nationwide television show that no computer tests of such a system were even run. Option C was merely dismissed.

Just as the Administration failed to inform the public about alternatives to the current registration program, it has inaccurately portrayed registration as a success. Perhaps the most compelling argument made by the report to keep registration is "that it would improve the fairness of the initial calls of a wartime draft, if the lists from which people are drafted are more complete and more accurate." But since the inception of registration in July 1980, the lists have been neither complete nor accurate.

Director Turnage testified before the Senate last week that there are still close to a half million non-registrants. Apparently, the vigorous enforcement program is not bringing large reductions in the numbers of non-registrants. While some years of birth are now at the 98% compliance Selective Service has stated is necessary to conduct a fair draft lottery the registrant rate for the prime year of induction in the order of call, those men born in 1963 has not reached that level.

More important, the General Accounting Office recently reported the 32% of the addresses of the prime induction age of birth group (those born in 1963) are inaccurate because of people moving but not reporting their address change. Thus, if a mobilization were to occur next month, only 68% of the primary age group could be speedily located. Add the number of non-registrants, and only 64% of the eligible pool would be available for induction. The Selective Service System's proposed address update program will do little to remedy this problem. The registration letters cannot be delivered to the group GAO could not locate. A new forwarding address of the registrant could be obtained from the Post Office and a new letter sent, but this process takes considerable time. The registrant may have moved again or he may have passed out of the prime year of induction before the address change is recorded. Moreover, as this process occurs more registrants will be moving. And relying on permanent home addresses, usually the address of a parent, is unreliable particularly if the registrant will only have ten days to report after an induction notice is mailed. This nonfunctional program will cost a million dollars a year.

It is likely that in the event of a national emergency, a new registration would have to be conducted in order to assume the completeness and fairness of the draft pool. As the GAO report concludes, "the moving registrant problem is so serious that it could result in class action suits challenging the fairness of induction processing." On the other hand, the Taskforce Report to the President concludes that "Selective Service historical reports suggest that 90% or more would register on time if the nation were mobilizing for a war." Post-mobilization registration, then, is a more equitable, more complete and more efficient system.

Although the Taskforce Report does substantially undermine the case for the current registration, it omits any disscussion of the most costly aspect of it--the enforcement program. Obviously, law enforcement agencies and the courts cannot handle the hundreds of thousands of men who have not registered. Nor can they possibly hope to handle the five thousand referals recently made by the Selective Service. To date, fourteen men have been indicted. Because of the complex and controversial legal questions involved in these cases, substantial government resources must be devoted to each case. These costs are never mentioned, let alone included, in the discussion of the costs of the registration program.

Beyond the question of the dollar costs of enforcement, there are the even higher civil liberties costs. The government, rather than choosing to indict non-registrants on a random basis--as it had the capability to do--adopted the discriminatory method of prosecuting only those who make public their views in opposition to registration.

Government documents disclosed in these prosecutions reveals that the government purposely undertook a discriminatory method of enforcement. For example, the Justice Department offical with operational responsibility for the enforcement system acknowledged that the system singled out vocal opponents of registration:

> "With the present universe of hundreds of thousands of non-registrants, the chance that a quiet non-registrant will be prosecuted is about the same as the chances he will be struck by lightening."

This purposeful discrimination in prosecutorial policy led a federal district court judge in California to invalidate the indictment of David Wayte. The issue here is not whether the government has the power to enforce the law, or whether the First Amendment bars enforcement. The issue is whether the law is being enforced in a nondiscriminatory manner. The government has been given ample opportunity in the Wayte case to rebut the evidence of discriminatory enforcement. It declined to do so, invoking the doctrine of Executive Privilege. The court in Wayte had little choice but to dismiss the charge. This issue is being raised in a number of the other prosecutions.

Furthermore, there is only one type of person who is being convicted of disobeying the law--the conscientious objector. The conscientious objector is obliged by his religious or ethical beliefs to be firm in his position, regardless of consequence. At least two federal judges have made findings on the record about the sincerity of the non-registrant's beliefs and have refused to sentence them to register in violation of these beliefs.

One would have thought that under our Constitutuion, citizens would be free to practice their ethical and religious beliefs without government interference. Should these CO's be imprisoned, the spectacle would be a black mark on principles that form the foundation of the Republic.

Draft registration thus has become a hollow symbol which demonstrates not our resolve to fight adversaries, but our foolishness in maintaining a costly program which doesn't work in the face of better alternatives. It should be ended.

Thank you for the opportunity to present our views.

Senator GARN. It looks like we may have run out of witnesses.

Major General Cocklin?

I know General Greenlief isn't here. I would recognize him.

Are either one of you witnesses? What is your name, sir?

Mr. JOECKEL. Charles Joeckel with the Disabled American Veterans.

Senator GARN. As long as you are here, we would love to have you come up and testify.

STATEMENT OF CHARLES E. JOECKEL, JR., DEPUTY NATIONAL LEGISLATIVE DIRECTOR, DISABLED AMERICAN VETERANS

Senator GARN. We are 40 minutes ahead of schedule.

Please proceed.

Mr. JOECKEL. Thank you.

I was here last year and experienced how quickly the committee moves, so I decided to come early again this year.

I won't read my formal summary or anything like that. I just wanted to appear here today to say this is one of the few times that we have ever appeared before this committee. We are not asking for any more than basically what the President has requested and what the Budget Committees have already passed on for the Veterans Administration. I would mention that we do support the funding in the budget resolution for a jobs program for veterans. A small $150 million program, we think, will go a long way toward helping many of those who have an unemployment problem among disabled and Vietnam era veterans.

In addition, Mr. Chairman, I would like to point out that we strongly support the VA's research program. The Senate Veterans Committee has asked for an additional $6 million, reprogramed from other funds, to increase this research. We are particularly interested in rehabilitation research for veterans who are amputees and need rehabilitation such as those in wheel chairs and blinded and hearing impaired veterans.

We have been watching your efforts in connection with VA's construction programs, and we are, too, concerned about where we are going in the future with the conversion of hospitals and beds in the system rather than just continuing to build new facilities around the country.

We think that we can utilize the current facilities that are available, not necessarily to meet the entire demand that will be placed on the system, but we can at least address it.

That concludes my summary. Thank you.

Senator GARN. Thank you very much.

I am interested in your comments concerning the addition of nursing care beds through the renovation of present VA hospitals rather than construction of new bed nursing homes. I know you have presented your plan to the authorizing committee and the VA. What has been their response?

Mr. JOECKEL. So far, they have had one more hearing to take a look at the way that the VA is constructing new nursing homes. They think that, first of all, you can have a model plan, a model construction plan and just build them as they are around the country as we need new ones. The committee was very receptive to the conversion of VA facilities. Presently, the VA has under plan conversion of two hospitals—one in Connecticut, one in Alabama, I believe.

We are not going to object to those sorts of things. I think that we have to take a look at what the system needs are and what we have out there. There are many vacant beds, and we can utilize them. I think that the authorizing committee—the Veterans Affairs Committee—will be supportive of that. In the long run, I think we can hold down expenditures within the VA by building model styled nursing homes as we need them in specific areas and conversion of existing facilities.

Senator GARN. I think you are aware of what I have been trying to accomplish for the last couple of years in the VA, particularly in construction program, which is to put them where needed; remove politics from those site selections and so forth. I got in a lot of trouble with some veterans. They didn't understand what I was trying to accomplish, and some of my own remarks probably did not help. I think you understand that is what I am trying to do.

Let's build them where the veteran population is and where it is needed, not because some Senator or Congressman wants the construction in his district.

Mr. JOECKEL. Sometimes that is a hard way to come around to the fact, but it is true. We know what you are particularly after now, and we are in favor of it.

Senator GARN. Thank you very much. I appreciate your coming.

Mr. JOECKEL. Thank you.

[The statement follows:]

STATEMENT OF CHARLES E. JOECKEL, JR., DEPUTY NATIONAL LEGISLATIVE DIRECTOR, DISABLED AMERICAN VETERANS

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

On behalf of the more than three-quarters of a million members of the Disabled American Veterans, I would like to thank you, Mr. Chairman and the members of the Committee, for giving us this opportunity to express our views on the VA appropriations request for Fiscal Year 1984.

As you know, Mr. Chairman, on behalf of the Veterans Administration, the President is requesting $26.1 billion in budget authority and $25.7 billion in outlays to administer the various programs and services for millions of the nation's veterans and their families in Fiscal Year 1984. In budget authority, the VA request is approximately $1.1 billion over the Fiscal Year 1983 estimates, primarily due to increases in the VA medical care and construction accounts.

Overall, Mr. Chairman, the VA request for next year is a good one in large part due to the efforts of the new VA Administrator, Harry N. Walters. Because of his efforts, we believe, the existing levels of benefits and services for the nation's service-connected disabled veterans and their families will not only be preserved but slightly increased. In this regard, I would like to take this opportunity to thank Administrator Walters on behalf of the members of the DAV.

While the DAV lends its strong support to the VA funding request for Fiscal Year 1984, we do have a few concerns which I will address during the course of my statement.

DEPARTMENT OF VETERANS BENEFITS

While the VA is requesting an additional $2.6 million for personnel benefits, overall employment in the Department of Veterans Benefits (DVB) will decline in Fiscal Year 1984 by 419 employees. The proposed increase in personnel funding reflects adjustments in employee health benefits costs and contributions to the Medicare program.

The reduction in DVB personnel will result from the anticipated decline in compensation, pension and education workloads -- the major portion of which will occur in readjustments benefits and services provided to Vietnam Era veterans enrolled under the G.I. Bill program.

Over the past few years, the VA has been fairly well on target in estimating changes in case load, particularly in the area of Readjustment Benefits. Barring the enactment of legislation that would establish a new "G.I. Bill" program or liberalize the delimiting date in the current program, the DAV does not object to the scheduled 1984 employment reduction in DVB.

I would request, however, Mr. Chairman, that the Committee pay close attention to the impact that the proposed DVB personnel reduction will have upon each Regional Office. We would suggest that the employee cut not be imposed in an across-the-board fashion, but rather, the VA should focus the reductions in areas where the education and adjudication workloads have particularly declined.

MEDICAL CARE

The Fiscal Year 1984 request calls for an overall funding increase in the VA's medical care account of $383 million -- an adjustment of approximately 5 percent. The increase will allow the VA to hire an additional 2,294 health care employees -- primarily to activate new facilities; treat 124,000 more veterans on an outpatient basis; and provide for an increase in beneficiary travel funding. Also, the VA will establish an additional Geriatric Research, Education and Clinical Center (GRECC), bringing the total number of GRECCs to nine.

While we are pleased to see some expansion of the GRECC program and the addition of 300 nursing care beds in the system, we are somewhat concerned over the loss of 800 more acute care beds in 1984. This proposed reduction will bring the total loss of acute care beds within the system to 5,100 since 1980.

We continue to believe that there exists a need to maintain acute care beds for the care and treatment of elderly veterans.

In addition, we believe that the shut down of beds, wards and certain sections of VA hospitals is a waste of resources. Considering the current demand on the system for nursing home care and the rate at which new nursing beds are being added to the system, we think that greater attention should be directed to the possible conversion to nursing care units of acute care bed sections within VA hospitals.

We are aware that the VA is remodeling part of a hospital to accommodate nursing care in Alexandria, Louisiana. In our view, the initiation of similar projects nationwide would make better use of current resources, more quickly serve to meet the current demand for nursing care and, in the long run, save the government money.

CONSTRUCTION

Keeping in mind our comments regarding nursing home care, Mr. Chairman, you will note that all but $60 million of the VA's $868 million construction program is devoted to the VA's health care system.

Of the $808 million in VA health care construction, only $67.3 million is set aside for nursing home care. Accounting for most of the 58 percent increase in construction funding for Fiscal Year 1984, is the scheduled replacement of the Minneapolis VA Hospital and the renovation, modernization and building additions at several health care facilities. In this regard, Mr. Chairman, the DAV wholeheartedly supports the VA's efforts to replace and modernize its older hospitals -- some facilities now more than 35 years old.

While we support full funding of the VA's request for construction programs, we are, nevertheless, concerned over the VA's commitment to meet its most pressing demands on the health care system.

Accordingly, we favor a plan which would call for the addition of nursing care beds to the system through the renovation and modernization within present VA hospitals. In this connection, I am submitting a copy of my statement to the Senate Veterans Affairs Committee dated March 23, 1983, which gives more in-depth treatment to this subject.

RESEARCH

Although the VA budget request for Fiscal Year 1984 shows a slight increase in medical and prosthetic research ($156 million), actual spending in 1984 will be below 1983 levels -- necessitating a reduction in the three research programs.

As you may know, Mr. Chairman, in Fiscal Year 1982 the VA actually had $12 million less than the amount which was available in the previous Fiscal Year to carry out its research mission. In order to accommodate the $12 million reduction in Fiscal Year 1982, funding for prosthetic research (Rehabilitation Research and Development) was cut by 20 percent from 1981 levels and a 6 percent reduction was levied in all biomedical research programs.

To bolster prosthetics research within the VA, the Congress last year mandated a $2 million increase in Rehabilitation Research and Development, providing $10 million for prosthetics, sensory aids and other special category research in 1983.

Mr. Chairman, we are deeply concerned over the funding provided in Fiscal Year 1984 for the VA's Rehabilitation Research program which funds projects such as prosthetics, wheelchair, blinded and hearing impaired rehabilitation research. Although this program is funded at less than 10 percent of the total VA research budget, the VA has proposed that 1984 rehabilitation research sustain nearly one-half of the proposed funding reduction and nearly one-third of the employment cut within the VA research budget. We are adamantly opposed to reducing the research funding which is generally used to improve life for combat and service-connected disabled veterans.

Accordingly, Mr. Chairman, we are again requesting that funds be specifically earmarked for prosthetic research. This could be accomplished by providing a line item in the VA appropriations measure, separating VA's RR&D account from general research funding or by providing specific report language for prosthetic research funding.

We base our request on the disproportionate reductions made in these accounts in FY 1982, the proposed FY 1984 cuts in rehabilitation research and upon the belief that more emphasis should be placed in areas such as spinal cord injury, blindness and amputations--conditions which are generally combat related.

PROPOSED LEGISLATION

To accomplish savings of $134.7 million in Fiscal Year 1984, the Administration is proposing to delay by six months the cost-of-living adjustment in nonservice-connected disability pension benefits, eliminate correspondence training and terminate advance payment of educational benefits.

In this regard, the DAV, with the exception of minor concern regarding correspondence training, has no objection to the enactment of the cost-savings measures proposed in the budget for 1984. We have, however, been alerted by several of our members to the impact that the elimination of correspondence training would have upon service-connected disabled veterans who are unable to leave their homes or to attend regularly scheduled classes. During the course of the year, we will detail our concerns in this regard when specific legislation is considered by the Committee.

In addition, Mr. Chairman, as National Commander Galian pointed out in his statement earlier this year, the DAV will not object to the proposed delay in the effective date of the Fiscal Year 1984 disability compensation and dependency and indemnity compensation increase, so long as similar adjustments are made in an even-handed manner in all other federal benefit and entitlement programs.

We note also, Mr. Chairman, that the Senate Committee on Veterans Affairs has ordered reported S. 1033, a bill which authorizes expenditures of $150 million in Fiscal Year 1984 to provide for a short-term program aimed at improving employment opportunities for veterans. As the proposed veterans jobs program is an authorization rather than an entitlement, we strongly urge the Committee to approve funding necessary to carry out the provisions contained in S. 1033.

OUTYEARS

As you know, Mr. Chairman, the DAV is extremely concerned over an outyear proposal contained in the Fiscal Year 1984 budget request that proposes to scale down cost-of-living adjustments beginning in 1985.

Under the recommended formula, service-connected veterans whose disabilities are rated at 100 percent would receive the full cost-of-living adjustment each year. Those rated 60 to 90 percent disabled, however, would receive only 85 percent of the cost-of-living adjustment, while those evaluated at 40 or 50 percent disabled would realize only 60 percent of the cost-of-living adjustment. Similarly, veterans rated in the category of 10 through 30 percent disabled would receive only 45 percent of the cost-of-living adjustment beginning in 1985.

Needless to say, we are adamantly opposed to such a plan, as the individual evaluations under disability compensation and their corresponding rates of payment already accomplish what this proposal seeks to achieve -- that is, to have the rates of payment reflect the degree of disability. We view the sole purpose of such a proposal as one which seeks to achieve savings rather than one which would equitably distribute federal dollars as the Administration suggests.

CONCLUSION

In summary, Mr. Chairman, with the exceptions and recommendations set forth in this presentation, the DAV supports full funding of the Fiscal Year 1984 appropriations request for the Veterans Administration. Again, I wish to thank you and the members of the Subcommittee for allowing us this opportunity to express our views on this very important subject.

STATEMENT OF MAJ. GEN. ROBERT F. COCKLIN (RET., USAR), EXECUTIVE VICE PRESIDENT, ASSOCIATION OF THE UNITED STATES ARMY

Senator GARN. General Cocklin.

General COCKLIN. Mr. Chairman, I am Maj. Gen. Robert Cocklin, USA retired, executive vice president of the Association of the United States Army. We appreciate the opportunity to reiterate our strong support for a viable selective service system in an ongoing register of 18-year-old males.

Since you have my full statement for the record, let me only make briefly three points that I think are important: The successful registration which we have been conducting over these past 3 years has provided our country with an enhanced deterrance and a military credibility far beyond the dollar adjustment required. Our willingness to put our selective service mechanism on an operational footing in peacetime and to require our young people to register has made a deep impression on both our allies and our potential adversaries.

Second, the unusual response by the young people required to register has been tremendously impressive. Despite the fact that there is very little advertising about the requirement to register these days, a compliance rate in excess of 95 percent is outstanding. We are approaching 10 million men who have so far registered. Polls have indicated an almost total acceptance of the need for registration amongs 18-year-old males, even though many of them would not choose military service as their first choice.

The final point I would make is that the need for this reservoir of registered young males has not diminished, despite the fact that in today's climate, the All-volunteer Service of all services has prospered. Recruiting meets all of its goals, and the educational level of those serving is at the highest point in recent years. We have reduced our active Armed Forces, for example, to dangerously low levels, while assigning greater responsibilities to the National Guard and the Reserve.

So we have done almost nothing, really, to alleviate the surge requirements that a mobilization would entail and the necessity for being able to augment promptly our Active National Guard and Reserve forces in the event of an emergency. So the need is real, and the cost is minimal.

We would urge your committee's full funding of the Selective Service budget so that this most cost-effective contribution to our deterrence could be maintained. That completes my statement, sir.

Senator GARN. Thank you very much.

General, your statement concludes with the comment that, "Freedom is not free." And that there exists inherent obligations and responsibilities.

Recently there has been a lot of discussion about this supposed obligation of the Government to provide student financial aid to students that refuse to register. Do you believe that the Government has such an obligation?

General COCKLIN. I do not, sir. I would be very much in favor of not providing such aid to students who refuse to register. I don't believe that anyone who chooses to disobey the law, that the Government has any real obligation to them at all.

Senator GARN. I would agree with you. Thank you very much.

General COCKLIN. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF MAJ. GEN. ROBERT F. COCKLIN, U.S.A., RET., ASSOCIATION OF THE UNITED STATES ARMY

Mr. Chairman, I am Major General Robert F. Cocklin, AUS Ret., Executive Vice President of the Association of the United States Army. We deeply appreciate this opportunity to appear before your committee on the proposal to rescind funding levels for the Selective Service registration system.

The 150,000 members of the Association I represent have long held that the Selective Service Act of 1967, as amended in 1971, which required an active standby Selective Service System, was being ignored by the nation's leadership when various Administrations failed to maintain a "complete registration and classification structure capable of immediate operation in the event of national emergency." We applauded President Carter's decision to revitalize the System and reestablish registration and, subsequently, that of President Reagan to continue registration, despite their publicly stated personal views to the contrary.

The Congress, in requiring a viable Selective Service System, must have been guided by the same philosophy as expressed by the late General Dwight D. Eisenhower when he said, "Tomorrow is never the time to start your preparation. The safety of this nation cannot be built on good intentions and the decision to prepare when the time comes."

Let me briefly list for you the national defense advantages of continuing registration:

o Peacetime registration is a necessary element of a capability to mobilize manpower swiftly in an emergency. It should be further noted that there is a Total Army mobilization shortage of pre-trained manpower in the combat arms of at least 100,000; therefore any savings of time, whether two weeks or six weeks, is critical.

o The exigencies of modern war demand completion in peacetime of as many preparatory actions as possible. Registration, one of the most crucial preparatory steps for manpower mobilization, can be completed prior to the onset of an emergency.

o Peacetime registration is a relatively low-cost measure which improves the ability to respond rapidly to an international crisis threatening large-scale war. It enhances preparedness by providing a functioning, tested mechanism to produce a continuous inventory of potential wartime manpower. In an emergency, when Congress determines that a draft is required, the existence of a computerized file of registrants permits a more rapid issuance of induction notices. As presently operating, the Selective Service System can meet the DoD established requirement of 100,000 by M+30.

o Termination of peacetime registration would delay the issuance of induction notices in an emergency by a minimum of four weeks because it would take that long to reestablish a registration system. Continuation of peacetime registration will provide wartime manpower much sooner than would be possible were we now to scrap registration and attempt to conduct registration and mobilization simultaneously in a future national emergency. Further, the present registration program provides an assured capability as compared with the risks and uncertainties of an unproven, standby system. Additionally, early inductee input insures maximum utilization of the Services' training capability and spreads the mobilization workload, resulting in more orderly and equitable processing.

o We hold that the act of registration is an expression of commitment to support U.S. national policy and a reminder to all of the obligation of citizenship. Also, it is a visible signal of U.S. resolve to potential enemies and to our allies, many of whom require compulsory military service.

o Peacetime registration does not change the basic manpower policy of continuing the All Volunteer Force -- a separate issue. Registration supports mobilization for war; the All Volunteer Force policy provides peacetime manpower. A fully-manned active and reserve force in peacetime does not preclude the necessity for a draft in the event of a larger scale national emergency.

o The mood of the country, reflected in public opinion polls, and the lack of significant public opposition to registration, support the continuation of peacetime registration. A late 1981 study of youth attitudes indicated only 21 percent of 16 through 21-year-old males were strongly opposed to draft registration, as compared with 30 percent one year earlier.

o Termination of peacetime registration at this time would confuse the citizens of this country, indicate vacillation in American policy, and signal a lack of resolve to safeguard America's national interests and to honor its commitments.

Some hold the view that peacetime Selective Service registration is an unwarranted intrusion into the private lives of young people. Our Association believes that the compliance rate of 95.4%, including 86% from the 1964 year group, is a dramatic demonstration of the law-abiding nature of our young men and their acceptance of this obligation. A year ago, when there was some uncertainty as to whether the President would continue the registration process, the Arlington, Virginia Journal conducted an unscientific local poll among 18-year-old males and found almost total acceptance and understanding of the need for registration, even though they might not have been thrilled at the prospect of being drafted in a national emergency.

We believe, as more than 9,500,000 young men who have registered must also believe, that:

- Registration should be viewed as a positive act; an essential ingredient of citizenship.

- For every right, there is duty -- all democracies have espoused this view.

- Philosophically, the obligation or duty to serve has long been part of our national ethic. Today some argue that Americans have forgotten this fundamental point. Peacetime registration transmits the right/duty message to America and creates the expectation that, faced with a crisis, all have the obligation to serve.

- Freedom is not free. There exists an inherent obligation/responsibility to defend family, friends, country.

  -- Registration displays commitment to do so.

  -- It enhances our ability to do so.

Mr. Chairman, this concludes my statement. I welcome any questions you may have.

STATEMENT OF MAJ. GEN. FRANCIS S. GREENLIEF (REG., NGUS), EXECUTIVE VICE PRESIDENT, NATIONAL GUARD ASSOCIATION OF THE UNITED STATES

Senator GARN. General Greenlief.

Please be seated. We are happy to have you before the committee today.

General GREENLIEF. Thank you, Mr. Chairman. I sincerely appreciate the opportunity to appear before you to present the views of the National Guard Association on the Selective Service System.

Recently, Congressmen Sabo and Green introduced H.R. 1050, a bill which would eliminate the peacetime registration requirement. Their stated reasons for eliminating peacetime registration are that registration is not working very well and that only 2 weeks could be saved by peacetime draft registration.

First, about 9.5 million men, or 95 percent of those eligible in the 1960 through 1964 year groups, have recognized their obligation as citizens and have registered.

The year groups 1960 through 1983 have a 97-percent compliance rate, and the 1981 year group exceeds 99.7-percent compliance. Those who have not registered comprise about 500,000 men, and of that number, about half are from the 1964 year group which has just completed its registration year. Selective Service System experience indicates that although nonregistrants from that year are late, most of them do register. Time is needed to make each year group aware of its obligation to register.

Year group 1963 had only 65.9-percent compliance at the end of its registration year, but late registrants have now brought that year group up to 96.6-percent compliance.

Second, it is suggested that a 1-day registration following mobilization will only cause a loss of 2 weeks in delivering young draftees to training stations.

Today's military planners believe that at least 6 weeks would be saved by peacetime registration. Peacetime registration delivers the first draftees in 13 days, a 6-week savings. Peacetime registration permits delivery of 100,000 men within 4 weeks. Peacetime registration opponents state that the Army cannot accept draftees at that rate using currently available facilities.

Such a statement, Mr. Chairman, completely overlooks the capability of 12 Army Reserve training divisions to provide trainer personnel and the ability of State-owned camps of the Army National Guard to provide training sites during emergency mobilization.

Our registration is, by no means, a complete solution to the military problems which have existed since the draft was abolished. However, it greatly accelerates the process of fully manning our forces in time of war, and at the end of fiscal year 1982, the Individual Ready Reserve, the IRR of the Army, totaled only 230,000. But of that number, only 70 percent, or about 160,000, were thought to be available as fillers to meet wartime's mobilization requirements.

The total shortage, Active Guard and Reserve, was 154,000.

The IRR does not have the pretrained manpower needed to fill the manpower shortages of the Active Guard and Reserve units and still serve as a ready source of manpower for combat loss replacements for an extended period. The 6 weeks saved by peacetime registration is vital.

The Selective Service System, in addition to requiring its full budget authorization, also needs a fiscal year 1983 budget supplemental of $560,000 in order to fund the 4-percent pay raise which began on October 1, 1982. Because the Selective Service System is such a very small agency, it cannot absorb that amount in its fiscal year 1983 budget.

In summary, Mr. Chairman, I urge that you maintain the Selective Service System at its full budgeted level for fiscal year 1984 so that its ability to continue peacetime registration is undiminished, so that a public awareness program can be continued, and so that its compliance program can be made more effective. And I also urge consideration in the fiscal year 1983 budget supplemental to insure that the fiscal year 1983 program, the current-year program, can continue undiminished.

Mr. Chairman, I thank you for the opportunity to present our views to your committee on this very, very important subject of selective service registration.

Thank you, sir.

Senator GARN. Thank you, General.

So to summarize your testimony, you favor putting the $564,000 back in for compliancy the House——

General GREENLIEF. Yes, sir.

Senator GARN [continuing]. That was taken out?

Then I would inform you that I do intend to put the $564,000 back in for Reserve training.

General GREENLIEF. Thank you. Thank you, sir.

Senator GARN. Thank you very much.

General GREENLIEF. Thank you.

[The statement follows:]

BIOGRAPHICAL SKETCH

MAJOR GENERAL FRANCIS S. GREENLIEF (Ret.)
Executive Vice President
National Guard Association of the United States (1974-)

Major General Francis S. Greenlief joined the staff of the National Guard Association of the United States in September 1974, after retiring as chief, National Guard Bureau on 1 July 1974. He was appointed the executive vice president of the 54,000-member Association in September, 1975.

General Greenlief was born in Hastings, Nebraska on 27 July 1921. He completed high school there and enrolled in the University of Nebraska in 1939 to study business administration.

He enlisted in Company G, 134th Infantry, Nebraska National Guard in Hastings on 5 July 1940, and was ordered to active duty with his unit on 23 December 1940 as a corporal. At the time of his entrance to Infantry Officer Candidate School in May 1942, he was acting first sergeant of the same company.

General Greenlief was graduated from Officer Candidate School and was commissioned a second lieutenant, Infantry, on 25 August 1942. He served as platoon leader and commanding officer, Company L, 134th Infantry in the European Theater of Operations from May 1944 until August 1945, participating in the Normandy, Northern France, Rhineland, and Ardennes Campaigns. He was released from active duty on 5 January 1946.

On 3 November 1947, General Greenlief rejoined the Nebraska National Guard as commanding officer, Company G, 134th Infantry. He subsequently served as S-3 of the 134th Infantry Regiment, acting assistant adjutant general of Nebraska, G-4 of the 34th Infantry Division and division chief of staff. He was promoted to colonel on 1 July 1957.

As a colonel, he was ordered to active duty from the Nebraska Army National Guard and assigned as executive officer, Army Division, National Guard Bureau on 1 January 1960. He was appointed brigadier general and designated assistant chief (Army), National Guard Bureau, on 3 November 1962.

General Greenlief was appointed as deputy chief, National Guard Bureau, on 14 September 1963 and was promoted to major general on 9 February 1965. On 13 September 1967, he was extended for an additional four-year term. On 20 April 1970, he was appointed director, Army National Guard in addition to his duties as deputy chief, National Guard Bureau.

He was appointed by the President and confirmed by the Senate to be chief, National Guard Bureau, for a four-year term and was sworn into office on 1 September 1971.

He completed flight training and was designated an Army aviator on 22 May 1969. He is qualified in fixed and rotary wing aircraft.

AWARDS AND DECORATIONS include Distinguished Service Medal, USA, w/cluster; Distinguished Service medal, USAF; Silver Star; Bronze Star; Purple Heart with three Oak Leaf Clusters; Croix de Guerre with Gold Star; European-African-Middle Eastern Campaign Medal with four Battle Stars; the Combat Infantry Badge and the Army Aviator Badge; Distinguished Service Medal, NGAUS; and many State awards.

Statement of Maj. Gen. Francis S. Greenlief (Ret.), Executive Vice President, National Guard Association of the United States

Mr. Chairman and members of the subcommittee, I sincerely appreciate the opportunity to appear before you to present the views of the National Guard Association of the United States on the Selective Service System.

In 1979, when the Soviet Union invaded Afghanistan, President Carter recognized the essentiality of demonstrating national resolve by instituting peacetime draft registration. In early 1981, President Reagan confirmed that position when he made the decision to continue peacetime registration.

Recently, Congressmen Sabo and Green introduced H.R. 1050, a bill which would eliminate the peacetime registration requirement. Under their proposal, the Selective Service System would continue to be manned and organized so that a nationwide one-day post-mobilization registration could be conducted at post offices should a wartime need ever arise. Their reasons for eliminating peacetime registration are that registration is not working very well and that only two weeks could be saved by peacetime draft registration. I would like to look at each of these issues, one at a time.

First, critics of Selective Service registration state that the system is not working. As a matter of fact, about 9.5 million men, or 95 percent of those eligible in the 1960 thorugh 1964 year groups have recognized their obligation as citizens and have registered. The year groups 1960 through 1963 have a 97 percent compliance rate and the 1961 year group exceeds 99.7 percent compliance. Those who have not registered comprise about 500,000 men. Of that number, about half are from the 1964 year group which has just completed its registration year. Selective Service System experience indicates that although non-registrants from that year are "late," most of them will register. Of the balance of those 500,000 non-registrants, as many as 200,000 are members of the National Guard and Reserve components of our armed forces. Those young men, serving as soldiers, sailors, marines and air men in the Guard and Reserves are not anti-war or anti-draft protesters, but they are patriotic young Americans who have voluntarily assumed the burden of military service in defense of our nation. Their failure to comply is solely due to lack of understandinag that the law applies to them despite their membership in the Guard and Reserves. Efforts are being made to make those young men aware of their legal requirement to register and that problem will be solved. Time is needed to make each year group aware of its obligation to register. Year group 1963 had only 65.9 percent compliance at the end of its registration year, but late registrants have now brought that year group up to 96.6 percent compliance.

Second, it is suggested that a one-day registration following mobilization will only cause a loss of two weeks in delivering young draftees to training stations. This assumption is based on a military manpower study prepared during the Carter Administration which was repudiated even before it was issued by the Department of Defense. President Carter did not rely on that study when he proposed and won approval for registration in 1980, and military planners do not rely on it today. As a matter of fact, today's military planners feel that at least six weeks would be saved by peacetime registration. Selective Service headquarters tells us that, if everything worked perfectly, post-mobilization registration might deliver the first draftees to training stations in eight weeks. Peacetime registration delivers the first draftees in 13 days, a six-weeks savings. Peacetime registration permits delivery of 100,000 men within four weeks. Post-mobilization registration would require ten weeks or more. When those data are presented, the peacetime registration opponents state that the Army cannot accept draftees at that rate using currently available facilities. Such a statement completely overlooks the capability of 12 Army Reserve training divisions to provide trainer personnel and the ability of the state-owned camps of the Army National Guard to provide training sites during a mobilization emergency.

Registration critics assert other deficiencies. They point out that in our mobile society, Selective Service cannot keep current address records. However, Selective Service registration data includes a social security number, which makes location a relatively simple matter when checked against employment information or I.R.S. tax data. Also, they present peacetime registration as an unwarranted cause of agitation among our youth. Registration takes less than five minutes of time in any one of more than 34,000 U.S. Post Offices. Each month about 150,000 young Americans peacefully perform that task of citizenship.

On the other hand, the United States is pressing its European allies to increase defense spending. Most of those allies not only register their young male citizens, but they conduct a peacetime draft to meet NATO military force requirements. West Germans feel that the best indication they could have of U.S. determination to defend Europe from a Warsaw Pact attack would be for America to resume drafting men into the Army. NGAUS does not recommend that, nor will it happen in the foreseeable future. However, it would be the worst sort of international signal for the United States to halt peacetime registration. The USSR would assume a lack of national commitment on our part, and certainly Europeans would be justified in questioning our NATO commitment.

Registration is by no means the complete solution to the military problems which have existed in the United States since the draft was abolished. However, it does serve a needed mobilization purpose. It greatly accelerates the process of fully manning our forces in time of need. At the end of fiscal year 1982, the Individual Ready Reserve (IRR) of the Army totalled 230,000. Because of changes in physical condition, family status, or occupation, only 70 percent, or 160,000, of that number were thought to be available as fillers to meet wartime mobilization requirements. Many of those available pre-trained individuals would not be trained in the combat arms specialties required for wartime expansion or as replacements for combat losses. At the same point in time, the active Army, at 780,000 strength, was 70,000 short of full wartime manning, while the Army National Guard and Army Reserve were each manned at strengths that were over 40,000 short of wartime requirements. The total shortage, active Guard and Reserve, was 154,000. It is apparent that the Individual Ready Reserve does not have the manpower needed to fill manpower shortages in active Guard and Reserve units and still serve as a ready source of combat loss replacements for an extended period. The six weeks saved by peacetime registration is vital. Peacetime registration is like an insurance policy, something that one hopes never will be used, but is always there if needed.

A fully funded Selective Service System can carry out the programs necessary to ensure public awareness of the need to obey the law, of the need to register. With constant attention, the Selective Service public awareness program will result in voluntary compliance by almost all members of each year group.

Continued full funding of the Selective Service program will allow the System to apply the necessary resources to its compliance program. The compliance program, through mailings, and through cross checks against social security, I.R.S., and drivers' license lists can ensure that almost all of the members of each year group will complete the registration process without the need of criminal prosecutions.

I have been told that the Selective Service System, in addition to requiring its full budget authorization to do its job effectively, also needs a FY83 budget supplemental of $560,000 in order to fund the four percent pay raise which began on 1 October 1982. Because the Selective Service System is a small agency, it cannot absorb that amount in its '83 budget. An unacceptable alternative to getting the needed supplemental is to eliminate drill pay for the Reserve officers who work at headquarters all across the country, on a parttime basis, recruiting and training the local Board members who will make Selective Service work in wartime. I urge you to provide the fiscal relief necessary to ensure that this does not happen.

In summary, in my statement I have urged you to maintain the Selective Service System at its full budgeted level for fiscal year 1984, so that its ability to continue peacetime registration is undiminished, so that its public awareness program can be continued and so that its compliance program can be made more effective. I have also urged consideration of a FY83 budget supplemental to ensure that current year programs continue undiminished.

Mr. Chairman, thank you for this opportunity to present this testimony in support of a program vital to this nation's wartime needs.

Senator GARN. I will try once more to see if Mr. Harold Schaitberger is here. He is standing us up today.

I understand that we are still well ahead of schedule; that Mr. Paul S. Egan and Mr. Robert E. Lyngh are here, deputy director of the National Legislative Commission, and the director of national veterans affairs, on behalf of the American Legion.

Mr. Egan, please proceed.

SELECTIVE SERVICE SYSTEM/VETERANS ADMINISTRATION

STATEMENTS OF:

PAUL S. EGAN, DEPUTY DIRECTOR, NATIONAL LEGISLATIVE COMMISSION

ROBERT E. LYNGH, DIRECTOR, NATIONAL VETERANS AFFAIRS, ON BEHALF OF THE AMERICAN LEGION

Mr. EGAN. Thank you, Mr. Chairman.

We are wearing two hats today. We are here to discuss appropriations for the Veterans Administration as well as for the Selective Service. Bob Lyngh will summarize our remarks concerning the VA appropriations and I will summarize our remarks concerning Selective Service. We can either go one right after the other or answer questions after each of us have completed our summary, whichever you prefer.

Senator GARN. Please, both of you go ahead and make your statements.

Mr. LYNGH. Thank you, Mr. Chairman.

The American Legion is pleased to have this opportunity to present its views on the veterans service for fiscal year 1984. In its submittal to Congress, the administration has proposed for the Veterans Administration budget authority of $26 billion and outlays of $25.6 billion. If adopted as proposed, this would be an increase of $1.3 billion for VA above appropriations for fiscal year 1983.

The American Legion wishes to state, in general, its approval of and satisfaction with the administration's approach to funding for veterans programs for fiscal year 1984.

Representing as we do 2.6 million veterans who have served in the four American wars of the 20th century and 1 million women of the Legion's Auxiliary, we must state we are acutely aware of the fiscal constraints that are impacting on the Congress as it strives to provide funding for all the activities and to meet all the responsibilities of the Federal Government. Veterans are taxpayers, too, and we realize full well that how Congress and the administration meet this responsibility may determine the well being of the Nation and all its citizens in the years to come.

However, it must also be stated that it has long been the Legion's firm conviction that when the national spending priorities are set, veterans programs should rank second only to national defense. It must be borne in mind that veterans performed exclusively national service. They are men and women who answered the elected government and defended with arms the national interest as defined by that government. Veterans programs are, therefore, a total responsibility of the Federal Government.

Subfunction 703, hospital and medical care for veterans, in which the committee proposes—I am referring now to the Committee on Veterans Affairs—proposes $8.9 billion in medical care for veterans in fiscal year 1984, including construction funds. This equals the amount proposed by the administration, with an adjustment of $5.7 million for minor construction for medical and prosthetic research. The American Legion agrees with this viewpoint. We would like to direct the attention to the subcommittee as emphatically as we can to the need for reinforcing the medical and prosthetic research fund for the processing of medicine and surgery.

The fact is, this element of the health care program for veterans has been previously underfunded for the past several years. In our view, given the proposed funding for medical services in the VA for fiscal year 1984, the research budget should be no less than $165 million. The administration has proposed an increase in construction funds of $319 million. May I stipulate, Mr. Chairman, that is a correction of an incorrect figure in our statement. The correct figure is $319 million.

This is a substantial increase in this category and we are happy to see it. The Government of the United States has a multibillion dollar capital investment in the VA health care plant. There is no other such plant to be found anywhere in the world. I would like to interpolate my statement here, Mr. Chairman, merely to say that we believe that the American Legion is probably the only nongovernmental organization that still has a full field service making site visits to Veterans Administration hospitals.

In this activity, we make site visits to about 65 hospitals a year, and we believe we are better informed than any other nongovernmental organization as to the needs for rennovation and replacement in that system.

So that we can say the VA system is a deteriorating system. It is composed of hospitals, some of which were built before World War II; some immediately following War War II; and many of which are simply not configured for the practice of modern medicine. Renovation, replacement, additions, and modifications are needed in vast quantities to bring VA to the practice of 1984 state-of-the-art medicine.

In our judgment, except for assistance on better setting of priorities, better planning, and more cost effective accounting for services, those who are challenging the VA health care facilities modernization program are operating either from ignorance or from lack of commitment to health care for the Nation's war veterans.

Mr. Chairman, other than the brief comments we have offered in this statement, we are satisfied with the proposals and funding for veterans benefits and services that are included in the report of the Committee on Veterans Affairs to the Committee on the Budget.

Senator GARN. Mr. Lyngh?

COMMENTS OF MR. LYNGH

Mr. LYNGH. There is just one further item concerning the VA budget which is the VA appropriation which is not included in our written statement, and it was not included at the time we drafted it simply because it wasn't clear at that time whether or not there would be a budget resolution passed by the Senate and whether or not it would include the authorization for $150 million recommended in S. 1033 by the Veterans Affairs Committee on the 12th of this month.

We would like to say for the record that we support that and hope that it is fully funded.

We examined the President's budget for Selective Service and find the total of $25.49 million to be a minimum burden on the direct taxpayer but which provides an impressive amount of insurance in the event of a mobilization. We support the budget request for Selective Service.

Following the reestablishment of selective service registration in July 1980, the registration of 10 million young men were placed on file. While we agree that the estimated 410,000 who have not registered appears to be an alarming number, it represents only a small percentage of the population required to comply.

In fact, it has been estimated that 84,000 of those who have not complied are members of the Reserve components of the Armed Froces and are simply unware that registration applies for them. The overall registration rate for all age groups is 91.1 percent which is a definite indication, in our judgment, that the system works.

On January 7, 1982, President Reagan made a decision to continue the peacetime registration program begun under President Carter. This decision was based on reports submitted in December 1981 by the Military Manpower Task Force. The findings of the task force indicated a savings of up to 6 weeks in the mobilization of military manpower in time of national emergency. We are unable to verify the claims that only 2 weeks would be saved, but even if that were the case, only 2 days can mean the difference between defeat or victory to the battlefield commander.

The American Legion is concerned by claims that registration is not needed by the military. Composed of both civilian and military leaders from the Department of Defense, the task force strongly recommends that the President continue selective service registration. Further, each member of the Joint Chiefs of Staff has testified at one time or other before congressional committees that as a bare minimum, a registration program must be in place and operation to assure that necessary manpower be available should mobiliization become necessary.

We also object to the charge that registration is not warranted by the public is inaccurate. Between 1978 and 1981, there was found to be an increase from 76 percent to 84 percent in the number of people surveyed who agreed that the country would be healthier if we had a draft under which all the young people of military age are eligible to be called up for a 2-year period so we could have an army of trained civilians who could be called up in an emergency.

While these polls indicate support for the conscription, which is not at issue here, we are firmly convinced that this support is equal if not greater than that for selective service. Registration as a first step in the conscription process—questions have been raised regarding the number of addresses which could be regarded as accurate. The Selective Service System has instituted a vadiation program to insure the accuracy of the addresses. Each year some 2.6 million verification letters will be mailed to 19- and 20-year-old registrants. The first mailing of 100,000 letters has taken place and revealed that 13 percent had moved or changed their addresses. The Selective Service System was able to obtain correct addresses from the Postal Service, while only 5.5 percent were undeliverable. These letters will be remailed to the permanent addressed provided by the registrant at the time of the registration.

Mr. Chairman, there are two portions of the selective service which we believe deserve the special attention of this committee. The issue of compliance is of utmost importance to the future of the system. If the public perceives that equity is being compromised due to poor compliance and lack of enforcement, the system will ultimately collapse. Therefore, it is absolutely imperative that measure insure compliance.

In the same vein, the measures taken by the Selective Service System highten the awareness of the public at large and are extremely important. The American Legion, therefore, supports the additional $800,000 requested by the Selective Service to promote public awareness of the selective service law.

Mr. Chairman, that concludes our oral presentation.

Senator GARN. Thank you very much. I share your commitment to assure that all of the VA's programs, and I quote: "Are carefully and tightly managed," and in this context, your comments in support of the VA's construction program are particularly relevant. Again I quote: "We are not going to say that better control over planning of construction programs is not indicated. We are not saying that better cost controls could not be practiced. We are not saying there could not be a better method of setting priorities and of periodic reviewing of needs criteria for individual projects."

I also believe that we need to upgrade the hospital system, and I certainly would like to work with you in the future to see that we can assure that is done in the best manner possible.

Mr. LYNGH. Mr. Chairman, I would like to add, we appreciate your comment on that. I would like to add that the caveat on the conditions and the cautionary measures that the Congress may be able to take to insure these things, I think, are well advised. At the same time, we hope that the committee will bear in mind that our personal knowledge of the renovation and replacement needs of the systen satisfied us that the expenditure of these sums of money are an investment in the capital assets of the Federal Government that cannot be delayed any longer.

We could give you, at any time that you would want, lists of things that are needed to be done in the system. As I said earlier, hospitals that were built before World War II, hospitals that are not configured to the practice of modern medicine, a great many things of this kind, space requirements that are not being met because of the change in the way that doctors practice medicine today, waiting rooms in hospitals are crowded.

I have been in many of them myself and have seen people standing wall to wall with not even any room to sit down, sitting there all day long without any food or any other activity waiting to be seen by a doctor, things of that kind going on at all times.

Senator Garn. I am not convinced that over the past few years, the VA has had any really good idea for these situations, and that has been, as I was saying to the previous witness, that those decisions ought to be made on the basis of need and not on the basis of politics. Too many of them, as I have looked at it, have been. You have underutilized good facilities and overutilized poor facilities.

I want to try and spend——

Mr. Lyngh. Could I offer one comment, Mr. Chairman? I don't want to take up any more of the committee's time. Some of these things were political influences, and no disrespect to any Members of the Congress, but our perception is that sometimes it is merely a question of priorities as to two hospitals, which one gets built first as, for example, in the case of Minneapolis, which was on the drawing boards, a badly needed replacement facility for 5 years, and all of a sudden, Albuquerque is at the top of the list. Things of that kind do have an impact.

Senator Garn. Occasionally you find out that politics and the needs match up, too. [Laughter.]

Mr. Egan. I am sure that is what Mr. Lynch was talking about.

Senator Garn. Thank you, very much, gentlemen.

Mr. Lyngh. Nice to see you.

[The statement follows:]

STATEMENT OF PAUL S. EGAN, DEPUTY DIRECTOR, NATIONAL LEGISLATIVE COMMISSION, THE AMERICAN LEGION

Mr. Chairman and Members of the Subcommittee:

The American Legion is pleased to have the opportunity to present its views on appropriations for Function 700 (Veterans Benefits and Services) for Fiscal Year 1984.

In its submittal to Congress, the Administration has proposed for the Veterans Administration Budget Authority of $26 billion, and Outlays of $25.6 billion. If adopted as proposed, this would be an increase of $1.3 billion for VA, above appropriations for Fiscal Year 1983.

The American Legion wishes to state, in general, its approval of and satisfaction with the Administration's approach to funding for veterans programs for Fiscal Year 1984.

To preface the brief remarks we wish to make as to certain items in the funding proposals, the Legion wishes to again make a point it has made before in submissions to this Subcommittee. Representing as we do, 2.6 million veterans who have served in the four American wars of the Twentieth Century, and 1 million women of the Legion's Auxiliary, we must state we are acutely aware of the fiscal constraints that are impacting on the Congress as it strives to provide funding for all the activities and to meet all the responsibilities of the Federal Government. Veterans are taxpayers too, and we realize full well that how Congress and the Administration meet this responsibility may determine the well-being of the nation and all its citizens in the years to come.

We know full well that they must, and we insist that all veterans programs be carefully and tightly managed by the Veterans Administration; that waste, fraud and abuse must be rooted out, and that all VA employees must carry out their duties in a most responsible manner, to conserve as much as possible Federal funds. Through its network of Service Officers, and its Field Representatives, who make regularly scheduled visits to as many as 65 VA medical centers and clinics each year, the Legion attempts to assist the VA to conduct its programs in the most cost-effective manner possible.

However, it must also be said that it has long been the Legion's firm conviction that when the national spending priorities are set, veterans programs should rank second only to national defense. It must be borne in mind that veterans performed exclusively national service. They are men and women who answered the call of the elected government, and defended with arms, the national interest as defined by that government. Veterans programs are, therefore, a total responsibility of the Federal Government.

In our comments on Function 700 funding for Fiscal Year 1984, we are guided by the Report of the Committee on Veterans Affairs to the Committee on the Budget. That Report was submitted on March 1, 1983. It recommends Function 700 Outlays of $25.6 billion, a dollar amount totalling $81 million less than the Administration figure. It can be said then that the Committee on Veterans Affairs and the Administration are in general agreement on funding for Function 700 programs for the ensuing Fiscal Year.

In reviewing the Report of the Veterans Affairs Committee, the Legion would offer the following comment.

Subfunction 701, Income Security for Veterans. The amount proposed is $14.4 billion, which is $193.7 million less than the amount proposed by the Administration. The most significant change is the Committee's acceptance of the Congressional Budget Office projection of a 4.1% Cost-of-Living Increase for compensation and pension programs, rather than the 5.1% estimated by the Administration. The Legion agrees with the lower figure since it represents the Consumer Price Index adjustment over the past year.

In this regard, something should be said about the Administration proposal to delay the cost-of-living increase for both compensation and pension for six months beyond their normally effective date. The American Legion's response to that initiative has been that, in fulfillment of their responsibilities as citizens, veterans will accept such a delay, providing only that any such delay shall apply equally to all Federal entitlement programs. It is the Legion's position that if any exceptions are made to this proposal, then veterans should be the first to be excepted, because they are the first responsibility of the Federal Government after provision for the national security.

Subfunction 702, veterans' education, training and rehabilitation. The Committee proposes $1.4 billion, which is $86.7 million more than the amount proposed by the Administration. Some of these funds are accounted for by the declination of the Committee to agree to the proposal to eliminate correspondence training and the advance payment of educational assistance allowance. The Legion strongly endorses the Committee's position. We have said all along that given the Federal Government's commitment to the goals of the education and training programs, there continues to be a place for correspondence training for veterans. The program serves those veterans who simply cannot undertake institutional education programs, but who have legitimate vocational goals that would facilitate their readjustment from military to civilian life. Close supervision, yes; but we do not think at this late date the Government should now deprive those veterans who can make a good case for correspondence training, of their opportunity to complete their readjustment.

The advance payment of educational assistance allowance has made the difference between education or lack of it for many veterans who simply could not subsist without some immediate assistance at the time they commence their education program. Given the need for this measure when it was instituted, we see no reason to discontinue it at this premature date.

In proposing a $150 million increase in Subfunction 702 funding, the Committee on Veterans Affairs addresses a problem the Legion wishes to bring to the attention of the Congress. That is the need for an increase of at least 15% in the subsistence allowance for veterans in training under vocational rehabilitation and GI Bill education programs. These subsistence allowances were last increased more than 2 years ago, and there has been an inflationary escalation in the cost of living in excess of 15% during that period of time. While Congress addresses the need to adjust compensation and pension allowances, we do not see how it can justify failure to adjust the subsistence allowance, given the Government's commitment to complete the task of aiding the readjustment of the returning service persons from the Vietnam Era.

Subfunction 703, hospital and medical care for veterans. The Committee proposes $8.9 billion in funding for medical care for FY 1984, including construction funds. This equals the amount proposed by the Administration, with an adjustment of $5.7 million from minor construction to medical and prosthetic research. The American Legion agrees with this adjustment.

We would like at this point to direct the attention of the Subcommittee as emphatically as we can to the need for reinforcing the medical and prosthetic research fund allocation for VA's Department of Medicine and Surgery. The fact is this element of the health care program for veterans has been seriously underfunded for the past several years. We have been unable to persuade Congress to heed our plea for more funds for research. The Administration this year, again did not propose an increase in research funding, and planned the reduction of 170 FTE's for the research program. We do not understand this apparent lack of comprehension on the part of those responsible, of the tremendous importance of a dynamic research program to enable VA to carry out the remaining elements of its fourfold health care mission. As we know these are, first the care of sick and disabled veterans, second participation in the training of health manpower for the nation, and fourth, to act as a contingency backup to the military medical program. It seems to us it is a given, and thoroughly understood fact by now that it is not possible to carry on a high quality comprehensive medical care program such as that assigned to VA, without the co-existence of a dynamic, high quality research program. In our view, given the proposed funding for medical services in VA for FY 1984, the research budget should be no less than $165 million. There should certainly be no loss of FTEs; the allocation of funds as among prosthetic, basic and health services research, we leave to the professionals. The one thing we know is that VA medical care cannot be successfully maintained without research, and that fact has not been recognized in recent years by those responsible for fund allocations.

We also wish to say a word about the construction fund proposal for FY 1984. The Administration has proposed an increase in construction funds of ~~$195.5~~ $319 million. This is a substantial increase in this category, and we are happy to see it.

The fact is there has been a proliferation of untrue statements about VA medical facility construction during the past two years, and the Legion has been looking for an opportunity to refute the untruths.

In the first place, we keep close track of what is going on in VA medical facilities through our Service Officers, our volunteer workers and our Field Service. We know what we are talking about.

In the second place, the Government of the United States has a multi-billion dollar capital investment in the VA health care plant. There is no other such plant to be found anywhere in the world.

In the third place, the VA system is a deteriorating system. It is composed of hospitals, some of which were built before World War II, some immediately following World War II, and many of which are simply not configured for the practice of modern medicine. Renovation, replacement, additions and modifications are needed in vast quantities to bring VA to the practice of 1984 state-of-the-art medicine.

We are not going to say that better control over planning of construction programs is not indicated. We are not saying that better cost-controls could not be practiced. We are not saying there could not be a better method of setting priorities and of periodic reviewing of needs criteria for individual projects. We are not saying any of those things. We are saying, however that those who allege VA medical facility construction is based purely on politics, or that it is a form of Federal boondoggling, do not know what they are talking about. We of the Legion are working in veterans hospitals every day of every year. We know what is going on there. We know what buildings are old and outdated and falling down and in bad repair and lacking in privacy and fire and safety standards. We know which hospitals cannot adequately care for female veterans;

and which hospitals are most crowded in the outpatient clinics, and understaffed and underequipped in the intensive care units.

The fact is that modern American medicine has changed profoundly and fundamentally since VA began to expand its health care program at the end of World War II. VA has not kept its physical plant up with what has happened in modern medicine. In our judgment, except for insistence on better setting of priorities, better planning and more cost-effective contracting for services, those who are challenging the VA health care facility modernization program are operating either from ignorance or from lack of commitment to health care for the nation's war veterans.

Subfunction 705, other veterans' benefits and services.

The Committee recommends an increase of less than $1 million in the Administration's proposal of $720 million for General Operating Expenses, which includes all VA activities except those identified in other subfunctions.

The American Legion wishes to caution the Subcommittee against any loss of personnel in the Department of Veterans Benefits. The Administration proposes an FTE reduction of something less than 420 in DVB for FY 1984. It proposes to accomplish this reduction through some legislative initiatives, most of which may not be approved by Congress.

Our cautionary note stems from our experience in assisting veterans at all of the VA Regional Offices. Any measurable reduction in personnel in the Regional Offices will result in delay in delivery of benefits. Since most VA beneficiaries are poor, and many of them are old, this will result in added hardship in times of economic stress for all Americans. We do not think Congress wants to inflict any additional hardship on veterans who are old and poor.

Mr. Chairman, other than the brief comments we have offered in this statement, we are satisfied with the proposals and comment reference funding for veterans benefits and services that are included in the Report of the Committee on Veterans Affairs to the Committee on the Budget. These are the figures we have to work with and so we have keyed our observations to them.

We wish to thank both the Administration and the Congress for their responsiveness to the needs and the problems of the nation's veterans. This will engender an equal responsiveness among the nation's citizens when there is a call to national service - devolving from the knowledge of our citizens that the nation does not, has not and never will forget those on whom it relies to protect the national security.

One additional matter of concern to The American Legion regards funding for Selective Service for FY 1984. We have examined the President's budget for Selective Service and find the total of $25,499 million to be a minimal burden on the American Taxpayer, but which buys an impressive amount of "insurance" in the event of a mobilization. We support the budget request for Selective Service.

Mr. Chairman, this Committee will likely hear a variety of arguments against the concept of Selective Service. We take this opportunity to present the views of our organization regarding some of those arguments.

Released on February 20, 1970, the recommendations of the President's Commission on an All Volunteer Armed Force on the best means to achieve an all volunteer military were as follows: raise the level of basic pay for military personnel, make comprehensive improvements in conditions of military service and establish a standby draft which would be enacted only by joint resolution of Congress upon request of the President. The first step toward the establishment of a standby draft, of course, "is a register of all males who might be conscripted when essential for national security."

Following the reestablishment of Selective Service Registration in July of 1980, a register with the names of over 10 million young men were placed on file. While we agree that the estimated 410,000 who have not registered appears to be an alarming number, it represents only a small percentage of the population required to comply. In fact it has been estimated that 84,000 of those who have not complied are members of the Reserve Components of the Armed Forces and are simply unaware that registration applies to them. Selective Service has recently developed a program to improve registration. Further, it is important when discussing the level of non-compliance to realize that more than half of the non-registrants are from the 1964 year group which has recently completed its registration year and for which the data have not been completely evaluated. The overall registration rate for all age groups is 96.1% which is a definite indication that the system works.

On January 7, 1982, President Reagan made a decision to continue the peacetime registration program begun under President Carter. This decision was based on a report submitted in December 1981 by the Military Manpower Task Force. The findings of the Task Force indicated a savings of up to six weeks in the mobilization of military manpower in time of national emergency. We are unable to verify claims that only two weeks would be saved, but even if that were the case, only two days can mean the difference between defeat or victory to the battlefield commander. Even more important, timely replacements and reinforcements can mean the difference between minimal loss of life under fire and total annihilation of a platoon due to unavailable support. Under the current system induction notices with a ticket to travel can be sent to the registrant within three days of an emergency. Those receiving notices would be expected to report to a processing center within 10 days of receipt. Within 30 days there could be up to 100,000 men undergoing training. Clearly, this would not be possible if there were no requirements for young men to spend five minutes filling out registration forms.

The American Legion is concerned by claims that "registration is not needed by the military." Composed of both civilian and military leaders from the Department of Defense, the Military Manpower Task Force strongly recommended that the President continue Selective Service Registration. Further, each member of the Joint Chiefs of Staff have testified before Congressional

Committees that as a bare minimum, a registration program must be in place and operational to assure that necessary manpower would be available should a general mobilization become necessary.

We also find ourselves convinced that the charge that registration "is not wanted by the public" is inaccurate, particularly in light of a recent Harris Poll Survey. Findings indicate that Americans would prefer substitution of the draft for the current volunteer system by between 37 percent and 60 percent. Between 1978 and 1981 there was found to be an increase from 76 percent to 84 percent in the number of people surveyed who agreed that the country would be "healthier" if it had "a draft under which all young people of military age are eligible to be called for a two year period so that we can have an army of trained civilians who can be called up in an emergency." While these polls indicate support for conscription, which is not at issue, we are firmly convinced that this support is equal to if not greater than that for Selective Service Registration as the first step in the conscription process.

Indeed, if one were to regard the current compliance rate as evidence of support for registration, the support is overwhelming. In fact, The American Legion views the compliance percentages as a heartening example of the respect that more than 10 million young men have for the laws of their country. When considering the overall negative impression of the Vietnam experience which has only recently begun to change, we find this group of young men commendable. Also, the sense of duty to country is laudably perpetuated by this notable group who willingly accept the responsibilities of our system of government and also willingly accept the burdens of assuring its future.

Questions have been raised regarding the numbers of addresses which could be regarded as accurate. A General Accounting Office report released in September of 1982 recommended that the Selective Service System institute measures to keep the data base current in terms of accurate addresses.

The Selective Service System has instituted a validation program to ensure the accuracy of the addresses. Each year some

2.6 million verification letters will be mailed to 19 and 20 year old registrants. The first mailing of 100,000 letters has taken place and revealed that 13% had moved or changed their addresses. The Selective Service System was able to obtain correct addresses from the Post Office while only 5.5% were undeliverable. These letters will be remailed to the permanent addresses provided by the individual at the time of registration. The result of this verification program is clearly indicative of success. The Selective Service System can reach some 94% of the draft age group in the event of a mobilization by using first class mail either directly delivered or forwarded by the US Postal Service.

Mr. Chairman, there are two portions of the Selective Service function which we believe deserve the special attention of this Committee. The issue of compliance is of utmost importance to the future of the system. If the public perceives that equity is being compromised due to poor compliance and lack of enforcement, the system will ultimately collapse. Therefore, it is absolutely imperative that measures to ensure compliance receive adequate funding. To do less is to invite unrest and civil disobedience similar to that of the late 1960's.

In the same vein, the measures taken by the Selective Service System heighten the awareness of the public at large and are extremely important. Violation of the Selective Service Act through non-registration is a felony. Congress has also passed laws denying certain federal benefits to those who do not comply with the Selective Service Act. Unfortunately there are always those who fail to get the word. To preclude having otherwise law-abiding young men lose some of the benefits of our society through simple ignorance of the law would be a travesty. Our government has the responsibility of ensuring this does not happen. Only an effective public awareness program will prevent it. The American Legion supports the additional $800,000 request to promote public awareness of the Selective Service Law.

Mr. Chairman, that concludes our statement.

Senator GARN. Has Mr. Schaitberger come in?

I will keep asking after each one and see if he ever shows up.

I understand that we are well ahead of schedule because of the no-shows. I understand that the last scheduled witness is here.

How do you pronounce your name?

Mr. ZUICHES. Z-u-i-c-h-e-s, Senator Garn.

Senator GARN. I am sure glad I didn't try. I would have fouled it up badly.

Would you, please, come up, and the last shall be first or something like that.

NATIONAL SCIENCE FOUNDATION

STATEMENT OF JAMES ZUICHES, PROFESSOR OF SOCIOLOGY AND ASSISTANT DIRECTOR OF THE AGRICULTURAL EXPERIMENT STATION, OF CORNELL UNIVERSITY (N.Y.), ON BEHALF OF CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

Senator GARN. Your reward for being early is to get to go nearly 2 hours before you are scheduled.

Please proceed.

Mr. ZUICHES. Thank you, very much. I appreciate the opportunity to be early. I will have a chance to get back to Ithica tonight.

My name is Jim Zuiches. I am a professor of rural sociology at Cornell University. I am also associate director of the Agricultural Experiment Station and for the office of research in the College of Life Sciences.

This office of research is responsible for the variety of biological, social science, agricultural engineering, communication arts, and educational research. That is done in the college.

In that capacity, I work ostensibly with social scientists across Cornell University. I also served for 3 years in the National Science Foundation as a program director of the sociology program while I was on leave from Michigan State University.

I am testifying today on behalf of the social science community; the social scientists at Cornell, and the members of the Consortium of Social Science Associations.

I might point out that this consortium consists of 150,000 social, economic, and behavioral scientists across the country, approximately one-fifth of all of the scientists in the United States.

I appreciate the opportunity to testify today, to speak in support of the social and behaviorial sciences in the NSF. The administration has, for the first time in 3 years, recommended an increase in the social, economic, and behaviorial sciences. This is at the same time that the administration has recommended very large increases for the physics, mathematics, chemistry, and engineering directorates within the NSF. The social science community obviously appreciates this recommended increase. Unfortunately, the increase requested for social and behavioral sciences is considerably less than that requested for other parts of the Foundation, and it still does not restore the social economic behavioral science programs to the level of support that they enjoyed in 1980.

The heavy budget cuts imposed in fiscal years 1982 and 1983 remain with the programs, and even with the increased proposal for 1984, social and behavioral sciences still remain 22 percent below their nominal level in fiscal year 1980.

This is a significant level of underfunding, and it continues within the NSF. I would argue, as I have done in my recent editorial in Science magazine, which has been attached to the testimony, that the next significant set of research questions are not simply technological in nature, although it is clear that that is an important element for economic productivity in this country.

The next significant set of research questions are going to be sociological, economic, psychological, and organizational in nature if the issue is economic development and productivity and research innovation.

The question is, How does one stimulate it? How does one bring about productivity? How does one provide an environment in which the individual can be creative?

What are the group and organizational characteristics that stimulate or inhibit creativity? How do individuals organize knowledge? The processes of pattern recognition that the psychologists have discovered provide a solid basis for creative thinking.

What are the stimuli that the individual, group, firm, and national levels which set the stage for continued employment activity and expanded growth?

What is the best way to diffuse new knowledge, to encourage its adoption and, in the process, to generate productivity? These are all social scientific questions that continue to need research support to understand how to solve these problems.

Since I left NSF, I have been associated with agriculture. And, of course, well studied science. I got my BA degree at the University of Wisconsin. My specialty is demography. I am very much concerned about urban-rural population trends and the concentrations in rural areas, so I have always followed the literature in the agricultural area.

It is obvious that agricultural social research on the influence and adoption of new agricultural knowledge from the lab to the field has often been demonstrated to result in higher productivity.

Fundamental social science research on the diffusion of medical innovations has been historically used by the pharmeuceutical firms as they market their products.

Such efforts are also required in other industrial and scientific areas.

I am urging not only the support of the $4.7 million recommended by the administration, but also the restoration of funds to the social and behavioral sciences to the level of fiscal year 1980.

This restoration would require an additional $12 million to be restored for social behaviorial sciences. The proposed administration increase of 13 percent obscures the fact that the social sciences continue to receive a declining proportion of NSF funds devoted to research and related activities.

Fiscal year 1980 social and behaviorial science programs received 5.9 percent of all the NSF funds for research. In fiscal year 1984, they will receive only 3.3 percent. If the social sciences were funded at the proportion of 1980, these programs would be allocated at nearly $12 million with a $200 million increase proposed by the Foundation instead of the $4.7 million proposed.

It is in this disparity and disproportion that allocation that has had serious repercussions for social science research and inhibits the contribution that social science contribution can make to increase economic activity and growth.

In my statement I discuss the consequences, and as a former program director, I am very much aware of the reduction as we cut the number of grants we can make.

We cut the average size of grants. We cut the number of students in training as part of their research activity under grants. We did try to maintain the large data set, and we were successful at maintaining the large data sets that are required for the infrastructure of social science, the large national data set, but we, nevertheless, had to cut a number of other projects, and there were many things that were not funded that I think would have benefitted us in the long run.

In my statement I describe the potential for research and organizational behavior. I attended a conference a week-and-a-half ago on managing for innovation.

At my job now, I am in the business of research management within the university. As I reviewed the papers and the substantive discussion of the researchers and the corporate business managers who were there, it became very clear that much of the basic research on organizational structure, on leadership roles and organizations, on bureaucracies, on turnover and productivity, on communication and information networks, the work that was cited by these people was work that had been funded in the late 1960's and early 1970's by the National Science Foundation, programs of social and economic and behaviorial and psychological science.

A second session at this conference was devoted to United States-Japan comparisons and, again, it became very clear that the sources of original research had been funded in the past, some of them by NSF; much of the basic research that was acknowledged as important in understanding United States-Japan comparisons, both in terms of organizational productivity and in terms of international trade, was work that was undertaken by social scientists in the 1960's and 1970's.

The significance of this research and the dividends of this research funded in the 1960's and 1970's are now coming to benefit us. Even during the period of budget reductions in NSF, our record of strong research is apparent. As a former program director, I am obviously very proud of the things we were able to support, even with the reduced budgets.

Now, with the average amount of the administration of the importance of these research questions, now is the time to restore social and behavioral sciences to a health status within NSF.

This is why I strongly support the overall increases for the scientific programs within NSF. It is also why I strongly support strengthening and returning by restoration of funds the social and behavioral sciences to the 1980 levels.

The restoration of funds would still mean a decline in the proportion of NSF research supported indicated to social science, a decline from 5.9 percent to 4.3 percent instead of 3.3 percent, which is the current administration request.

Such a restoration, I believe, is justified in terms of the scientific priorities. I think it would also strengthen the research base, and I think it would contribute to the likely success of our research agenda.

Thank you, very much, Mr. Chairman.

[CLERK'S NOTE: Mr. Zuiches subsequently provided the following table to accompany his testimony:]

1979

Research Funding on Organizational and Labor Force Issues from Sociology Program, NSF

Name	Title	Award	Amount	(thousands)	
		1982	1981	1980	1979
Education Processes					
S. L. Harlon Wellesley Univ.	"The Effects of Education & Training Differences on the Employment Opportunities of Women & Men."	78			
G. E. Thomas Johns Hopkins Univ.	"Understanding the Selection of Academic Majors and Careers."	80			
Labor Force Analysis					
C. Jencks and L. Rainwater Harvard Univ.	"Substantive Analysis of the Survey of Job Rewards."	40			
M. J. McClendon and E. Mutran Akron Univ.	"Cohort Analysis of Worker Disabilities and Labor Market Functioning."	43			
R. Mare U. of Wisconsin Madison	"Social & Demographic Sources of Change in the Youth Labor Market."			71	60
L. Rainwater C. Jencks Harvard Univ.	"Worker Assessments of Job's Nonmonetary Characteristics."			46	144
Organizational Analysis					
S. B. Bacharach Cornell Univ.	"Dependence & Bargaining				78
M. C. Brown and C. N. Halaby U. of Wisconsin & SUNY-Albany	"Collaborative Research on the Bureaucratization of Employment Relations."		19 24	43 47	37 46
M. T. Hannan and N. B. Tuma Stanford Univ.	"Selection and Competition in the Life Cycles of Organizations."		80	117	97
S. Stewman Carnegie-Mellon	"Organizational Demography % Labor."		212		
H. E. White Harvard Univ.	"Markets & Organizations. Applying Mathematical Models to Social Structures & Processes."	75	75	92	
P. M. Hirsch and T. L. Whisler U. of Chicago	"Strategies of Corporate Board Behavior."		60	97	57
A. L. Kalleberg J. R. Lincoln J. P. Near Indiana Univ.	"Organizational Control Systems & Worker Commitment in the U.S. and Japan."	114			
M. Meyer U. of California Riverside	"Comparative Study of Organizations."			94	
M. Useem and S. M. Miller Boston Univ.	"Comparative Study of the Social Organizational & Social Mobility of Business Leaders."				11
Scientific Processes & Innovation					
R. S. Burt U. of California Berkeley	"Medical Innovation & Social Network Position."			46	
J. Lankford U. of Missouri Columbia	"Growth & Development of a Scientific Specialty: Astrophysics & the Transformation of the Am. Astronomical Community, 1855-1936."	25			
R. McGinnis Cornell Univ.	"Networks of Basic & Applied Research Communities in Agricultural Science."		16	84	103
N. C. Mullins and L. L. Hargens Indiana Univ.	"The Social Structure of Scientific Specialties."			20	67

Research Funding on Organizational and Labor Force Issues from Sociology Program, NSF

Name	Title	Award 1982	Amount 1981	(thousands) 1980	1979
H. Zuckerman and J. R. Cole Columbia Univ.	"Career Patterns in Scientific Research Performances."	74	120	118	
Technology & Social Change					
G. E. Lenski U. of North Carolina	"Technology & Social Change: Conceptualization & Measurement."		165		
C. B. Perrow SUNY-Stony Brook	"Accidents in High Technology Systems."		59	82	
A. S. Tannebaum U. of Michigan	"Status Consequences of Technological Changes in an Intentional Communal Society."	41			
S. Zukin CUNY-Brooklyn College	"Responses to Economic Decline in Selected American Industries."		34		
	Total	570	864	957	700

Senator GARN. Thank you, very much.

We appreciate your willingness to be here, particularly the fact that you were here so early.

Mr. ZUICHES. Well, I appreciate the opportunity.

Senator GARN. Your promptness has its rewards.

[The statement follows:]

STATEMENT OF DR. JAMES J. ZUICHES, CORNELL UNIVERSITY, ON BEHALF OF THE CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

Introduction

Senator Garn, Members of the Subcommittee:

My name is James J. Zuiches, and I am Associate Director of the Agricultural Experiment Station and Professor of Rural Sociology in the College of Agriculture and Life Sciences at Cornell University. I am also Associate Director of the Office for Research of the College and work extensively with social scientists across the Cornell campus on research project development. I am testifying today on behalf of Cornell University, the social scientists organized in the Cornell Institute for Social and Economic Research, and the Consortium of Social Science Associations (COSSA), which represents some 150,000 social and behavioral scientists in the United States. A list of COSSA Member, Affiliate, and Contributor organizations is attached to my testimony.

I appreciate the opportunity to appear before this Subcommittee to present testimony on the National Science Foundation's budget request for FY 1984, and particularly on the appropriation for the NSF social and behavioral science programs. This Subcommittee has been a strong support of NSF generally, and of the social and behavioral science programs in particular, and I urge you to continue that support.

Let me start by noting the principal characteristics of the NSF budget for FY 1984. The data appear in Table 1, and can be summarized briefly as follows:

1. The Directorates for Mathematical and Physical Sciences (MPS), and Astronomical, Atmospheric, Earth, and Ocean Sciences (AAEO) are increased by slightly over 20 percent from last year, enough to bring them significantly above their FY 1980 level in terms of real dollars;
2. The biological science parts of the Directorate for Biological, Behavioral, and Social Sciences (BBS) are

increased by a bit under 20 percent, which brings them slightly above their FY 1980 level in terms of real dollars; 3. The social and behavioral science programs in BBS are increased by 13 percent, which puts them 22 percent *below* their *nominal* 1980 level, roughly 40 percent *below* 1980 real dollars.

Table 1

National Science Foundation:
Funding Levels for Selected Directorates
and Program (Millions)

	Actual 1980	Actual 1983	Proposed 1984	Percent 80-84	Change 83-84
Directorate for Mathematical and Physical Science (MPS)	227.0	299.7	364.3	+60	+22
Directorate for Astronomical, Atmospheric, Earth and Ocean Science (AAEO)	218.1	276.2	334.9	+54	+21
Directorate for Biological, Behavioral and Social Science (BBS)	185.7	190.2	223.6	+20	+18
Biological Science	133.3	154.2	182.9	+37	+19
Social and Behavioral Science	52.4	36.0	40.7	-22	+13

It is significant that the Administration, for the first time in two years, is requesting an increase in the budgets of the social and behavioral sciences along with increases in the physical and biological sciences and engineering. Unfortunately, the increase requested for the social and behavioral science programs in FY 1984 is considerably less than that requested for other parts of the Foundation, and the very heavy budget cuts imposed in FY 1981 and FY 1982 have not been restored.

My own view, and that of the Consortium of Social Science Associations, is that the Administration's emphasis on research in its FY 1984 budget request is both wise and appropriate. George A. Keyworth II, the President's Science Advisor, has repeatedly said that the FY 1984 budget figures are intended to reflect the importance that the administration attaches to the role of research in dealing with the current economic situation. The FY

1984 research budget is intended to stimulate fundamental basic science, technological innovations, and economic development that will lead to sustained economic recovery. We fully endorse Dr. Keyworth's intention.

We differ with him, however, in that we cannot see sustained economic recovery emerging from a policy that defines research and development so narrowly as to exclude the level of support for the social and behavioral sciences that is necessary under current conditions.

I would argue, as I have done in my recent editorial in Science magazine (copy attached), that the next significant set of research questions in the area of Dr. Keyworth's concern are social, economic, and behavioral in nature. For example, how do we organize research groups for innovation? What are the group or organizational characteristics that stimulate or inhibit creativity? How do individuals organize their knowledge cognitively and then solve scientific problems? What are the stimuli, at the individual, group, firm, and national levels, which will set the stage for continued productivity and expanded employment growth? What is the best way to diffuse new knowledge, encourage its adoption, and in the process generate higher productivity? These are social scientific issues that continue to need healthy research support.

Such research does bear fruit. It has frequently been demonstrated that social science research on the diffusion and adoption of new agricultural knowledge from the lab to the field is associated with increases in agricultural productivity.

I would like to be sure that the Subcommittee fully understands the position of the Consortium of Social Science Associations. COSSA supports the large increases for the mathematical and physical sciences, the atmospheric and ocean sciences, engineering, and the biological sciences. But if the purpose of the NSF increase for FY 1984 is to stimulate technological innovations and economic development, there must be a considerably larger increase in the budgets of the social and behavioral science programs than is presently scheduled. Both technological innovation and the economy are the objects of social and behavioral science research. Productivity, for example, is as much a behavioral as a technological problem; and the introduction of new technologies is as dependent upon social, organizational, and behavioral factors as it is on technical factors. Moreover, future use of new technologies will be as constrained by workers' skills, mobility, and adaptability -- all studied by social and behavioral scientists -- as by the availability of investment capital and technological innovations. In short, there is no technological quick-fix that will solve our problems.

The FY 1984 budget request for an increase of 13% in the social and behavioral sciences is appreciated, but using the same criteria as Dr. Keyworth has used, of "scientific excellence and promise...and the potential for an activity to contribute to important national economic and productivity goals," I would strongly urge further restoration of funding for the social and behavioral sciences to the 1980 level. One reason for such a restoration is that the social and behavioral sciences continue to receive a declining proportion of NSF funds devoted to Research and Related Activities. In FY 1980, the social and behavioral science programs received 5.9% of all the funds in Research and Related Activities. By FY 1983, it was only 3.4%. In FY 1984, despite the requested 13% increase, the social and behavioral science programs at the Foundation will receive even less -- only 3.3% of research funds. If the NSF social and behavioral science programs were funded in FY 1984 at the same proportional level as they were in FY 1980, these programs would be allocated nearly $12 million over the requested level for FY 1984.

Impact of budget reductions

I want to comment briefly on the intellectual costs of the budget cuts over the past few years. I am very familiar with the consequences because I managed one of the research programs severely under a severely reduced budget in FY 1981-82. From 1979-1982, I was a program director of the Sociology Program in NSF, serving as a rotator, on leave from my university to administer a scientific program of research support for NSF. My comments, however, can easily be generalized to the other social and behavioral science programs.

First, there is a cost in terms of the quality and number of new students entering the social and behavioral sciences. As budgets for individual projects were reduced the support available to train the next generation of skilled scientists declined.

Second, the breadth of research topics supported declined. As the number of awards declined, and the average size of grants dropped, the character of the research has a tendency to shift from large-scale or national projects to smaller, more localized and hence less generalizable research.

Third, although program directors, with the advice of their scientific communities, maintained the funding of the large-scale data bases, a major part of the infrastructure of social science, this commitment of funding for data collection meant other types of higher-risk, innovative large-scale projects could not be adequately funded. There should be no question that the National Election Studies, the General Social Survey (which documents trends in a wide variety of social, economic and demographic conditions in the U.S. population), or the longitudinal Panel Study of Income Dynamics would receive continued support. But a crucial and timely series of monographs on 18 different social topics using data from the 1980 Census required a major effort to patch together funding from multiple programs within NSF, other federal agencies, and at least two private foundations.

The consequences of these reductions in numbers of awards, levels of funding per award, number of students supported, and breadth of research topics are to slow the scientific progress of a field and reduce the likely contribution when it is most needed.

NSF has proposed a program of "enrichment" for the mathematical and physical science programs. I would argue that a comparable program for the social and behavioral sciences would be possible if funds were restored to the FY 1980 levels for social social and behavioral science research. Such a program of "enrichment" would strengthen the social and behavioral sciences at NSF by increasing average award size, student support, and number of projects that could be funded. Continuity of support is as essential for the social and behavioral sciences as that for other scientific areas.

Scientific Opportunities

I have neither time nor space to explore the many new areas of research in the social and behavioral sciences but I do want to discuss some dividends of past research and the potential for research in one area that has come to my attention this year.

The study of organizational forms -- their functioning, how they change, and their consequences for productivity, profitability, innovation, and labor -- is growing as a substantive focus of research in social and behavioral science. The basic research agenda emerging, in part, reflects the contemporary problems facing the economy: the organizational capacities for technological development, human factors in the diffusion and implementation of innovation, democratization of bureaucratic structures, corporate expansion and reorganization, and segmentation of labor markets.

The critical issues are the elaboration of conceptual models of organizational behavior and the methodologies for testing the validity of the propositions derived from them. The foundation for this basic research program is exceptionally strong.

I recently attended a conference on "Managing for Innovation" and noted the extensive citations for basic social science research on organizational structure, leadership roles, bureaucratic attributes, turnover and productivity, and communication and information networks in organizations. Much of this work had been funded by NSF social and behavioral science programs in the 1960's and 1970's. Similarly, when discussions shifted to the comparative differences between U.S. and Japanese organizations and industrial structure, fundamental research of the last decade provided the scientific basis for current research.

Three distinct, yet interrelated, areas of research can be identified in the literature of organizations: the social structure of the market, the population ecology organizations, and the structure of organizational careers. Each line of inquiry is at a frontier of specification with major intellectual figures of social science, armed with state-of-the-art methodology, approaching the unexplored. But the breakthrough likely to catapult each scientific enterprise and reorient thinking about the structural determinants of organizational behavior and outcomes is the intersection of these three lines of research currently developing in parallel. The process of testing, applying, reformulating, and synthesizing awaits additional research.

Some current research foreshadows what new initiatives in these areas will require. Experience with exploratory efforts indicate:

1) Existing data bases require extensive transformation to be made suitable for statistical analyses.

2) New data resources must be generated on representative samples of organizations to establish the generalizability of the propositions tested and to scrutinize industry and sector variation.

3) Longitudinal data will be essential in determining how organizational transformation evolves and what its causal outcomes will be.

4) New conceptual models of the process of work in changing organizations and of the nature of productivity are also needed.

5) Certain issues require international comparisons because focussing only on the U.S. context is too restrictive particularly since exploratory work shows cross-national differences.

6) Statistical techniques appropriate to hypotheses tested are at an early stage of development. Extensions of "network analysis" and "event-history analysis" appear to be promising approaches but will require support for their development and application.

At current and proposed funding levels it is very difficult to promote this emergent research agenda. Funding for exploratory efforts means moving at a very slow pace. This type of research requires expert management and close supervision of data collection. Data transformation entails sophisticated coding and file matching with customized and innovative computer programming -- all of which are very expensive in both personnel and computing costs. Although a theoretical and empirical base is accumulating, extensions beyond these early efforts will be prohibited by budget constraints.

Summary

I urge the Subcommittee on HUD-Independent Agencies to restore the NSF social and behavioral science research programs to their FY 1980 level on the grounds that investment in research on social and behavioral processes in our society is as important to increasing productivity and meeting other national needs as investment in other scientific areas. This investment ought to have a high priority.

Thank you for this opportunity to submit this statement and to speak in support of the social and behavioral sciences.

1989

Members

American Anthropological Association
American Economic Association
American Historical Association
American Political Science Association
American Psychological Association
American Sociological Association
American Statistical Association
Association of American Geographers
Association of American Law Schools
Linguistic Society of America

Affiliates

American Association for Public Opinion Research
American Educational Research Association
Association for Asian Studies
Eastern Sociological Society
Economic History Association
Evaluation Research Society
History of Science Society
Law and Society Association
National Council on Family Relations
North Central Sociological Association
Northeastern Anthropological Association
Population Association of America
Regional Science Association
Rural Sociological Society
Social Science History Association
Society for American Archaeology
Society for Psychological Anthropology
Society for the Scientific Study of Religion
Society for Social Studies of Science
Southwestern Social Science Association

Contributors

University of California, Berkeley
University of California, Los Angeles
Center for Advanced Study in the Behavioral Sciences
University of Colorado
Columbia University
Cornell Institute for Social and Economic Research
Georgia Institute of Technology
Harvard University
Indiana University
Institute for Social Research, University of Michigan
University of Illinois
University of Iowa
University of Michigan
University of Missouri
University of Nebraska
University of Oregon
University of Pittsburgh
Princeton University
Social Science Research Council
University of Southern California
Stanford University
Texas A&M University
Tulane University
University of Washington

[From Science, May 20, 1983]

High Technology and the Social Sciences

The recent AAAS colloquium on "R & D, High Technology, and Economic Recovery" provided multiple analyses of and justifications for the Administration's 1984 budget for research and development. The scientific and research management communities heard numerous assessments justifying defense priorities. They were also assured that substantial increases in funding of basic research in the physical sciences and engineering, primarily by the National Science Foundation, would lead to innovations in high technology and contribute to economic expansion and employment growth.

Inevitably, these analyses also raised a series of fundamental research questions about the training and supply of scientists and engineers, the problems of organizing research groups for innovation, the diffusion of knowledge and transfer of basic research from the laboratory to marketable technologies, and about the process of job creation associated with high-technology development. Each of these questions, posed at the colloquium by representatives of the Office of Science and Technology Policy, Office of Management and the Budget, and by other speakers, is central to the domain of social science. These questions, taken together, outline an agenda for basic social science research. Not all the participants in the colloquium, however, seemed to recognize the social scientific nature of these questions and the research efforts needed to understand the conditions conducive to technological innovation and the likely consequences of such change.

The challenge to the research community lies in providing research-based answers to these kinds of questions. Psychologists, sociologists, and economists have addressed these questions in studies of national laboratories, careers of scientists including Nobel Laureates, and the rise and productivity of specific industries, such as the semiconductor industry and agriculture.

A key question concerns the impact that organizational size and complexity, bureaucratic structure, and regulatory procedures have on productivity and innovation. Some analyses suggest support for small, high-technology firms will lead to higher rates of innovation and increases in employment; and policies have been proposed to support the individual small firm. But, is it the critical mass of many small firms on Route 128 in Massachusetts or in Silicon Valley that provides a creative environment? In such an environment ideas diffuse rapidly and spin-off growth of new firms is accelerated. A definitive answer concerning the relation between job creation and size of firm still remains elusive.

We need to understand the impacts of technological change in economic and social terms. Typically, economic benefits are estimated but potential costs ignored. Technological innovation in one area often means technological obsolescence in others. This can affect community tax bases as well as the demand for products of some firms and for skills of some workers.

These research questions represent only a few dimensions of the social science research agenda, yet research in such areas remains severely hampered by the reductions (despite partial restorations) of funds for social, economic, and behavioral science research in NSF and other agencies. The importance of the research questions and needed answers should justify support. The record of performance also warrants it. The value, significance, and yield of basic research in the social and behavioral sciences, concluded a 1982 report of the National Academy of Sciences*, justifies continued public investment as a national resource. Like basic research in physics and engineering, basic social science research is an indispensable part of the effort to achieve and sustain economic growth.—James J. Zuiches, ***Associate Director, Agricultural Experiment Station, College of Agriculture and Life Sciences, Cornell University, Ithaca, New York 14853***

Committee on Basic Research in the Behavioral and Social Sciences,** ***Behavioral and Social Science Research: A National Resource **(National Academy Press, Washington, D.C., 1982).**

STATEMENT OF L. THOMPSON BOWLES, M.D., PH. D., DEAN OF ACADEMIC AFFAIRS, ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Senator Garn. I understand that Thompson Bowles is here.

Mr. Bowles. Yes, sir.

Senator Garn. Dr. Bowles, if you would like to come up, the dean of academic affairs and representing the Association of American Medical Colleges.

Dr. Bowles. Thank you, sir.

Senator Garn. Please, proceed.

Dr. Bowles. Mr. Chairman, ma'am, and sirs, I am Dr. L. Thompson Bowles, professor of surgery and dean for academic affairs at the George Washington University Medical Center. I am pleased to be here today and speak on behalf of the Association of American Medical Colleges, and I thank the subcommittee for the opportunity.

With your permission, I will summarize my statement, and allow the full version to be placed in the hearing record.

Senator Garn. It will be placed in the record.

Dr. Bowles. Thank you, sir.

The association is the national voice for all 127 accredited university medical schools, their administrations, faculties, students, and the more than 400 teaching hospitals, including 97 VA facilities. It's interest in the VA's medical program dates to the early post-World War II period and the origins of the exceptional productive affiliation agreements that have been forged between medical schools and VA medical centers.

These agreements are of enormous benefit. For the VA, the partnership made in the recruitment of high-quality staff and in the generation of new knowledge in areas particularly significant for the care and treatment of veterans.

For the medical schools, affiliation agreements have extended resources for graduate and, to some extent, undergraduate medical education; currently 134 VA hospitals are affiliated with 100 medical schools.

Although the association finds the budget before the subcommittee sound, it does, in our view, have deficiencies which are within the power of Congress to correct.

Regarding medical care, the budget request is essentially at the current services level. The amount requested reflects a 5-percent increase over the estimated fiscal year 1983 level. One must ask if this amount is adequate to provide the quality of care that the veterans of this Nation deserve.

The 15-percent annual rate at which overall national health expenditures have been increasing raises considerable doubt as to whether its proposed 5-percent increment is enough to maintain that standard.

Health care, as the subcommittee knows, has always been personnel intensive and is growing increasingly more so due to progress in medical science. We can now save many patients, who, just a few years ago, succumbed, often rapidly.

However, we can save many such patients only after prolongued periods of complicated and severe illness that require intensive work from a host of medical care personnel.

The proposed staff ratio for VA medical and surgical beds shows a very modest increase from 2.79 to 2.84, an increase of about 1 percent. By comparison, the ratio now prevailing in non-Federal hospitals is 3.47.

One must seriously question whether VA staffing is adequate to yield the level of care that most of us agree should be provided. The VA makes an important contribution to the education and training of many categories of health professionals.

The association is distressed to note the small 3.4-percent increase planned for education and training in fiscal year 1984. On the other hand, the association, which has recently issued a report under graduate medical education in preparation for improved geriatric care, is pleased to note the expanded training opportunities in geriatrics being made available through the VA.

After careful review, the association recommends that the $185 million over the President's request be provided for the VA medical care budget to address these and other concerns.

The breakdown of this amendment is contained in the detailed statement.

The concerns of the association on the budget for medical and prosthetic research are more serious. Tremendously exciting and important work has been and is being conducted throughout the system.

At the Washington VA Hospital here in the District of Columbia, rapidly advancing knowledge in spinal cord injury holds exciting promise for a great many veterans. Experiments in which basic nerve cells are being successfully grown in the spinal cords of rats shows that there are genuine prospects of dealing with the tragic consequences of spinal cord injuries.

Such research takes time and cannot operate on a start-and-stop basis.

Without continuity of support, critical advances of this nature are seriously delayed or fail to materialize at all. Even if one views such consequences in cold economic terms, the economic implications for the future are profound in avoiding this research. The budget for medical rehabilitation and health services research has not fared well in recent years, although the Congress did provide a substantial increase over the administration request for fiscal year 1983 to partially compensate for previous errors.

The proposed medical and prosthetic research budget represents about a 5-percent reduction on a purchasing power and will necessitate a reduction in employment of 170 full-time equivalent employees.

In the medical research program, investigator-initiated studies would have to be reduced by 90 projects. Reduction in rehabilitation, as well as in health services research, would also be necessary.

This start-and-stop, up-and-down financing makes no sense. Employees recently recruited as a result of the catchup increases provided in the fiscal year 1983 appropriation will find their continued employment under a cloud as a result of the need to reduce the FTEE's by 170.

This is not the way to establish coherent programs and attract and retain top-flight personnel. Further, the research programs of the VA are too important in terms of their contributions to both medical research and quality health care for veterans to be cut in such an arbitrary fashion.

The association recommends an appropriation of $9.7 million over the President's request. I would be pleased to answer any questions the committee might have on these matters.

Senator GARN. Thank you, Doctor.

As you state, funding for the VA's medical care account is proposed to increase in fiscal year 1984 over fiscal year 1983 level. In fact, the increase is about 6.5 percent. In addition, the staff-to-patient ratios have increased each year since I have been chairman of the subcommittee.

I note you are requesting, however, an additional $110 million for increased staffing.

How did you arrive at that particular figure?

Dr. BOWLES. I think that that was derived, in part, Senator, in an effort to make the staffing patterns somewhat more comparable to the non-Federal sector. We would be the first to admit that health care costs are increasing at a rate that is alarming.

Nevertheless, it does seem to us that the care provided in the veteran sector ought to approximate the quality of care that is available in the non-Federal sector, and we felt that that increase in the appropriation would aid in achieving that objective.

Senator GARN. Thank you, very much, Doctor.

We appreciate your being here.

Dr. BOWLES. Thank you, Senator.

[The statement follows:]

STATEMENT OF DR. L. THOMPSON BOWLES, PH.D., DEAN OF ACADEMIC AFFAIRS, GEORGE WASHINGTON UNIVERSITY MEDICAL CENTER, ON BEHALF OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

The Association of American Medical Colleges (AAMC) is pleased to have this opportunity to present its views on the proposed appropriations for the Veterans Administration.

The Association is the national voice for all 127 accredited U.S. medical schools and speaks on behalf of their administrations, faculties, students and their more than 400 teaching hospitals, including 97 VA facilities. Its interest in the VA's medical program dates to the early post-World War II period when the architects of the modern VA health care system, Drs. Paul Hawley and Paul Magnuson, were searching for a strategy to improve the quality of medical care for the veteran patient. To accomplish this they proposed affiliating as many VA hospitals as possible to medical schools.

Such agreements, now in force between 100 medical schools and 134 VA hospitals, have been of enormous mutual benefit. The medical schools have assumed responsibility for operating the graduate medical education programs, i.e. residency programs, of the VA. To this end, most of the permanent staff of the affiliated VA hospitals have been recruited by, and been tendered faculty appointments in the affiliated medical school. The opportunity to be associated with a medical school and to engage in scholarly pursuits of research and teaching has made VA positions attractive to highly skilled clinicians, and, as a consequence, the caliber of care available to veterans has been unusually high. The medical schools have profited by an infusion of competent and stimulating scholars. In many instances, the resources of the VA hospital have become available to undergraduate medical education, with consequent gains to medical students. Finally, many joint ventures in research have been possible to the substantial advantage of the veteran patients.

Clearly, a close partenership of large dimensions has developed between the medical schools and the VA health care system, a fact that accounts for the AAMC's interest in this agency's budget. By and large, it is a sound budget but not without its shortcomings.

Medical Care

The medical care budget request is essentially at the current services level, based on projected needs to cover inflation, increased usage and activations. The amount requested in FY 1984 for the operation of facilities, $7.663 billion, reflects a 5% increase over the estimated FY 1983 level. Is this amount adequate to provide the quality of care that a grateful nation believes the veterans who have given it so much deserve?

For a variety of reasons a 5% increase is not enough to maintain the desired quality of care. One way of examining this issue is to look at the staffing of VA hospitals. Health care is personnel-intensive and staffing in civilian hospitals has increased about 5% per year over a long period. This expansion is required by progress in medicine. New treatment modalities and technology have greatly improved prevention, diagnosis, treatment and the quality of life of the veteran patient. Implementation of these advances requires higher staffing ratios and more highly trained personnel. The proposed staff ratio for medical and surgical beds (FTEE/census) in VA hospitals shows a very modest increase, from 2.79 to 2.84 per occupied bed, an increase of about 1%. In this context, it should be noted that the staffing ratio for the VA falls significantly short of that now prevailing in comparable non-federal hospitals of 3.47. Another measure of the static nature of staffing in VA hospitals is that the number of FTEEs/1000 patients treated is projected to rise from 114 to only 116. In view of what is known about the demands of modern medicine, one must seriously question whether the proposed increase can possibly maintain the level of care that should be provided.

One must also question whether the proposed increase can accommodate the demands for new equipment and supplies that are created by progress in medicine. The cost of some of the extremely effective new anticancer, antimicrobial and cardiovascular drugs are notoriously high and straining budgets all over the country. There is cause for serious reservations about whether the projected increase of 10% for drug procurement in this budget will be adequate.

Education and Training

The VA makes an important contribution to the education and training of health professionals of many types. The Association is distressed to note the small increase, from an estimated $402 million in FY 1983 to only $416 million, or 3.4%, in FY 1984, to support this important national function. On the other hand, the Association, which has devoted considerable energy in the past few years to the issue of geriatrics, and has recently issued a report, Undergraduate Medical Education Preparation for Improved Geriatric Care, is very pleased to note the expanded training opportunities in geriatrics being made available through the VA.

After careful review of available information, the Association recommends an increase of at least $75 million to cover such items as the increased cost of drugs, support for contract hospitals, nurses salaries, and several other smaller needs. In addition, sufficient additional funds should be provided to cover the costs accruing from the recent decision to bring new Federal employees into the Social Security system. Finally, the Association urges that $110 million be provided to increase the overall VA hospital staffing ratio from 2.25 in FY 1983 to 2.31 in FY 1984, thus more closely approximating experience in the national health care system.

Medical and Prosthetic Research

The VA has established an enviable reputation throughout the entire world in many domains of biomedical research---a reputation that rests on a far longer list of accomplishments than the Yalow and Shaffly Nobel Prizes that head up its string of international and national citations. Tremendously exciting and important work has been and is being conducted throughout the system.

The medical research program of the VA is intrinsically important for its contributions to medical knowledge and for its special focus on the unique medical problems that characterize the veteran population. Moreover, it is also indirectly critically important to the quality of health care that veterans receive. This is because the opportunity to do research attracts good staff physicians and exceptionally able residents to VA facilities and retains them.

The budget for medical, rehabilitation and health services research has not fared well in recent years, although the Congress did provide a substantial increase over the Administration request for FY 1983 to partially compensate for previous losses. For FY 1984, the $1.5 million increase requested is miniscule. The proposed medical and prosthetic research budget represents about a 5% reduction in purchasing power. The VA estimates that it requires an increase of $6.8 million just to fund uncontrollable items in the budget. Consequently, it projects that the small increase requested will necessitate a reduction in program activity of $5.3 million and a reduction in FTEE of 170.

Under the proposed medical research budget, in order to preserve cooperative studies, career development awards, agent orange studies and other high priority programs, albeit at levels below the amount required to offset inflation, VA administrators would have to reduce investigator-initiated studies, the heart of the research program, by 90 projects involving 136 FTEEs and $4.0 million. Similar reductions in rehabilitation research of 8 projects, involving 32 FTEEs and $1.0 million, as well as in health services research of 3 projects, involving 12 FTEEs and $0.2 million would also be necessary.

This stop-and-start, up-and-down financing makes no sense. Employees recently recruited as a result of the catch-up increases provided in the FY 1983 budget will find their continued employment under a cloud as a result of the need to reduce FTEEs by 170. This is not the way to establish coherent programs and attract and retain top-flight personnel.

The VA programs in medical, rehabilitation and health services research are generally sound and in many instances not only distinguished but of world renown. Moreover, they serve the dual purposes of advancing knowledge and, through knowledge, health, and of insuring an otherwise unattainable level of clinical excellence. Medical and prosthetic research should receive an appropriation adequate to maintain current program levels.

The Association, therefore, recommends an appropriation of $165.0 million, enough to cover a 5% increase in costs due to inflation and to continue to restore the program to previous levels of activity at the extremely modest extent of an additional $2.5 million.

STATEMENT OF DONALD H. SCHWAB, DIRECTOR, NATIONAL LEGISLATIVE SERVICE, VETERANS OF FOREIGN WARS OF THE UNITED STATES

Senator GARN. Next, I understand Donald Schwab is here, director of National Legislative Service for Veterans of Foreign Wars of the United States.

Mr. SCHWAB. Yes, sir.

Senator GARN. Mr. Schwab, we are pleased to have your testimony.

Mr. SCHWAB. Thank you, Mr. Chairman.

It is a pleasure to be here, and in tbe essence of time, I will summarize my statement with the understanding it will be published in full in the text of this hearing.

Senator GARN. Yes, it will be.

Mr. SCHWAB. Mr. Chairman, we think the VA budget as reflected in the First Concurrent Budget Resolution passed by the Senate is a very good budget. There is substantial increase in the medical care account; the construction account is the largest in the history of the Veterans Administration. We did have some concerns, and we still have some concerns. I think the two most important were the low funding in the medical and prosthetic research area.

I understand that $5.7 million has been added to that account by reducing the minority construction program by a similar amount.

Our other concern dealt with the funding for a jobs program, and I understand $150 million is included in this budget for a jobs program, specifically, for disabled and Vietnam veterans.

There are differences between the Senate- and House-passed budgets. If we could have the best of two worlds, we would like to see the House prevail with the funding for medical and prosthetic research, because they added $6 million to the budget for it rather than taking it out of another account, and we would like to see the Senate prevail in conference to persuade the House to put $150 million in their budget resolution for a jobs program since legislation for a jobs program for veterans is advancing in both Houses.

That concludes my summary, Mr. Chairman.

I would be happy to respond to any questions you may have.

Senator GARN. Thank you, Mr. Schwab.

In the VFW's resolution, which you have attached to your statement, opposes the elimination of the reduction of existing VA benefits in order to fund new VA benefit programs.

Mr. SCHWAB. Yes, sir.

Senator GARN. At the same time you are suggesting an additional $5.7 million for research and $150 million for job training. The thing that I wonder is does that imply then, that Congress is never supposed to look at a previously established program to see where we can improve, change, better ways to spend the money?

Mr. SCHWAB. No, sir, not at all. However, we are acutely aware of a number of laws that have been passed where the money has not been forthcoming; where they have not been funded.

Specifically, for example, Public Law 96–330 authorized increasing the geriatric education research centers from 8 to 15. That was in August 1980. Only in the fiscal year 1984 budget does the Veterans Administration request money for one additional center, which is badly needed, and there are others.

We would prefer, of course, to see new programs funded if they are necessary with new money rather than draining other programs. But as I pointed out in my testimony, $5.7 million is a considerable amount for research, and it is rather an infinitesimal amount in minor construction considering the $75 million that Public Law 98–8 is assigned to maintenance repair and VA hospital medical care.

Senator GARN. The thing I am trying to get at is prioritizing which is something I have said for the last couple of years, that however large the pie is, that we ought to try and take care of the highest priority items first, and that has been the problem with the construction program particularly; where those hospitals and renovation sites are, where the greatest veterans population need is rather than political considerations.

I appreciate your concern for the construction program, the Baltimore replacement hospital, specifically, and I would like to ask for your further assistance to help us to convince the VA that they ought to prioritize these projects with whatever money is available from the Congress, that we fund the highest priority and the nost needed once first.

Mr. SCHWAB. Our priorities are clearcut, Mr. Chairman.

Our first priority is the maintenance and the tendering of the hospital and the medical care system, the integrity of the compensation of the DIC programs, and the integrity of the pension programs. Everything is after those priorities.

The VA is working on prioritizing hospital construction and nursing home care construction in view of the shift in demographics and the veteran population, a great deal of it to the Sunbelt States, and the new medical program is looking into this in depth.

Senator GARN. Thank you, very much.

We appreciate your attendance.

Mr. SCHWAB. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF DONALD H. SCHWAB, DIRECTOR, NATIONAL LEGISLATIVE SERVICE, VETERANS OF FOREIGN WARS OF THE UNITED STATES

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Thank you for the privilege of appearing before this distinguished Subcommittee to present the views of the Veterans of Foreign Wars of the United States.

My name is Donald H. Schwab and it is my privilege to serve the more than 1.96 million men and women of the Veterans of Foreign Wars as their National Legislative Director.

Mr. Chairman, as of this writing, the Concurrent Resolution drafted by the Senate Budget Committee, S. Con. Res. 27, closely tracks the President's proposed budget for the Veterans Administration. The President submitted to Congress in January a federal budget of $848.5 billion in outlays and a VA budget of $25.69 billion or 3.02 percent of the federal budget. S. Con. Res. 27 would provide a federal budget of $848.9 billion in outlays and a VA budget of $25.7 billion or, again, 3.02 percent of the federal budget.

Mr. Chairman, the VFW supported the President's proposed budget in testimony before the Veterans' Affairs Committee as an extremely good budget particularly in view of present economic conditions and that the budgets of eight other functions of the federal government were to be cut a total of $22.5 billion in outlays. We even reluctantly supported the six month delay in cost-of-living increases in the compensation and pension programs to insure their integrity provided the beneficiaries of all other federally funded benefit programs, without exception, are required to make exactly the same sacrifice. This is not to say, however, that certain areas of underfunding did not cause us concern. Several of these concerns continue to exist with respect to funding proposed in S. Con. Res. 27.

We are, indeed, pleased, Mr. Chairman, with the increase in the medical care budget which provides for an increase in average employment of 2,306 personnel and raises the staff to patient ratio to 2.27 to 1 overall and in surgical bed sections to 2.29 to 1. The construction budget is the largest in the history of the Veterans Administration and we are delighted that funding is included for the 845 bed replacement hospital in Minneapolis, Minnesota; substantial modernization of the Biloxi and Gulfport, Mississippi facilities and seven nursing home care units. It is regretted, however, that no anticipated date is given for construction of a VA replacement hospital in the Baltimore-metropolitan area. You will recall that on May 11, 1976, President Ford announced that a 400 bed hospital would be built in Baltimore. Funds for planning and design were appropriated in the fiscal year 1977 and construction funds in the fiscal year 1980. Construction was to have commenced between June and October 1980 with 1983 as the target date for completion. The Veterans Administration has already spent $8 million on this project, $3.5 million for working drawings and $4.5 million for purchase of the construction site. Then, the project was cancelled due to budgetary constraints, according to the Veterans Administration. Notwithstanding, we are all aware that the local health planning agency which had authorized the overbuilding and overbedding of community hospitals for personal, private financial gain strongly opposed the construction of this badly needed replacement hospital. This is the same scenario that delayed construction and increased the cost of the VA hospitals in Portland, Oregon and Minneapolis, Minnesota. The Baltimore facility is listed as one of the ten hospitals most in need of replacement or renovation and further delay will merely increase its cost. Further design plans are not necessary and since construction could start immediately, funding should be included in the fiscal year 1985 budget, if not the 1984. In addition, Baltimore is a highly depressed area in the labor market and going forward with construction would create 500 jobs for a three year period.

Mr. Chairman, beneficiary travel for veterans traveling to VA facilities for treatment at $91.2 million, up $6 million from the current fiscal year, was considered adequate. However, the Senate Veterans' Affairs Committee has ordered favorably reported S. 578 which, among other measures, would reduce beneficiary travel by $20 million to realign funding to provide increased funds for community nursing home care and to fund preventive health care and a pilot adult day care services program. This is a committee amendment since the original bill would have reduced beneficiary travel by $35 million to fund the Pilot Adult Day Care Services Program by placing a $10 deductible on beneficiary travel unless the veteran was seeking care for a service-connected disability, a nonservice-connected disability if rated 50 percent or more disabled due to a service-connected disability or a World War I veteran participating in the Pilot Adult Day Care Services Program. The VFW strongly opposed this reduction in beneficiary travel in testimony before the Senate Veterans' Affairs Committee both because the funding is needed for beneficiary travel and, also, in accordance with our current Resolution No. 608, a copy of which is appended to my testimony, which opposes the funding of new legislative initiatives by reducing or eliminating existing benefits.

Mr. Chairman, disturbing to the VFW are the reductions of $4.1 million, 110 employees and 400 beds in the domiciliary care program; $9.6 million in the outpatient fee program; $2.8 million in contract hospital care and the projected reduction of 1,000 patients in the average daily patient census in Veterans Administration hospitals. These reductions in medical care will most directly affect our aging veteran population and women veterans who often require specialized care which is not readily available in all Veterans Administration facilities.

In a related area, Mr. Chairman, the Veterans Administration made no effort whatsoever to expand the Geriatric Research, Education and Clinical Centers program (GRECCs) until the Honorable Harry N. Walters became Administrator. One of the provisions of Public Law 96-330, encoded as 38 USC 4104(f), authorized expansion of the GRECCs from eight to fifteen. Although the law became effective August 26, 1980, only in the fiscal year 1984 budget was funding of $2.0 million and 20 additional employees requested for the activation of a ninth GRECC. With the rapidly aging veteran population, the Veterans Administration should accelerate increasing the number of GRECCs.

Mr. Chairman, the VFW is also concerned that while the entire VA research effort is receiving an increase of $1.5 million in appropriations, this vital program will actually have a net loss of $1.3 million in outlays. Further compounding this situation is the fact that the medical research function will actually receive in excess of $2½ million while the rehabilitation research and health services research functions will be decreased almost three-fourths of a million dollars and one-fourth of a million dollars, respectively. We believe that each of these research functions are essential to the VA's continued capability of providing quality health care to our nation's veterans, therefore, we view it extremely shortsighted to increase the budget for medical research while substantially decreasing the rehabilitation and health services research efforts. Rehabilitation research is the focal point for research and development leading to new improved means of assisting disabled veterans, and as such provides the most direct benefit to disabled veterans. Health services research is essential to the VA's continued capability of running the nation's largest and most complex medical care system. The Senate Veterans' Affairs Committee, in its report to the Budget Committee, recommended that appropriations be increased for the medical and prosthetics research account by $5.7 million and, further, that rehabilitation research be allocated up to $10 million and health services research up to $4.5 million. The VFW enthusiastically supports the requested $5.7 million increase for medical and prosthetic research. Hopefully, this funding could be added to the VA appropriation rather than siphoned off from minor construction. However, in the final analysis, $5.7 million is a substantial increase in research funding and would have little impact on minor construction particularly since Public Law 98-8 allocates $75 million for the maintenance and repair of Veterans Administration medical care facilities.

Mr. Chairman, the shortage of registered nurses required the closing of 211 hospital beds in the fiscal year 1982. Although Public Law 97-251, the "Veterans Administration Health Care Improvement and Extension Act of 1982," made more attractive the pay scales and working conditions for registered nurses and expanded the Nurses' Scholarship Program authorized by Public Law 96-330, there continues to be a shortage of registered nurses nearly throughout the Veterans Administration hospital and medical care system. We are pleased that $4.3 million was requested to create a cadre of registered nurses with a service obligation to the Veterans Administration. However, this amount is down from $6 million in both 1983 and 1982 and it is essential appropriate funding be made available in the out years so that student nurses can complete their four years of training.

Mr. Chairman, the VFW has misgivings with respect to the continuing reduction of personnel within the Veterans Administration's Department of Veterans Benefits. The loss of an additional 419 personnel in the upcoming year will represent a 28½ percent reduction since 1976 without, we are advised, a proportionate reduction in the overall workload. True, the number of veterans receiving GI Bill benefits continues to decrease as more veterans reach their ten year delimiting date. It is also true that the number of beneficiaries under the pension program is declining due to deaths and the stringent assured income levels imposed by Public Law 95-588. However, the caseload in the Loan Guaranty Program has skyrocketed. For example, in May 1982 when interest rates were prohibitive, housing loan applications totaled 10,130. By comparison, in January of this year, the Department of Veterans Benefits processed 29,984 loan applications. Continued personnel reductions can only result in longer and longer delays in the processing time of all applications and claims of veterans and their survivors. Furthermore, we are not convinced that the Office of Management and Budget has abandoned its plan to reduce most Veterans Administration Regional Offices to mere contact offices with neither adjudication capability nor the personnel to maintain the claims files of veterans. As a matter of fact, in responding to our current VFW Resolution No. 611 entitled "Maintain VA Regional Offices," also appended to my testimony, the VA stated: "The issue of regional office operations is currently under review as part of the Chief Benefits Director's Management Advisory Committee study of benefits delivery. The dual goals of improved cost effectiveness and continuation of high quality service to veterans will govern any recommendations regarding possible improvements to the field organization." Reducing regional offices to mere contact offices would not only impede a veteran's ability to pursue a claim, but restrict representation of the veteran by our nationwide network of Service Officers.

Mr. Chairman, it would appear that our Vietnam veterans are being asked to undergo a disproportionate share of reductions in federal spending. The budget makes no provision for a cost-of-living increase for those availing themselves of educational benefits under the GI Bill and the Administration would eliminate correspondence training which is the only means by which many veterans can advance their educational level and, also, advance payments under both the vocational rehabilitation and educational assistance programs. The last GI Bill increase was granted by Public Law 96-466 and was a two-step increase with five percent effective October 1, 1980 and five percent effective January 1981. It is my understanding a cost-of-living increase will be requested in the fiscal year 1985 budget, but, of course, this would grant relief commencing only with the 1984-85 school year.

Mr. Chairman, the VFW is most deeply concerned with the unemployment situation as it pertains to our nation's veterans. There are presently over 800,000 Vietnam veterans actively seeking employment not to mention older veterans whose jobs in the "smokestack industries" and those replaced by automation are forever lost. Vietnam veterans in the 30-34 year age group are suffering a 12.8 percent unemployment rate up from 9.4 percent a year ago and considerably higher than that of their nonveteran counterparts. At the request of the Senate Veterans' Affairs Committee, S. Con. Res. 27 contains $150 million in both budget authority and outlays to enable the Veterans' Affairs Committee to consider certain educational and job training initiatives.

The Office of Management and Budget, of course, opposes this additional funding since it was not included in the President's proposed budget. In letters to the Chairman of the Senate Veterans' Affairs Committee, dated April 27, 1983 with respect to two pending jobs bills, the Veterans Administration stated: "Public Law 98-8, the comprehensive jobs bill, was recently enacted into law providing a substantial sum from the federal budget for providing jobs for our general population and that measure should be given a chance to work before any further jobs bills are favorably considered." Although Public Law 98-8 allocates $75 million for the maintenance and repair of VA hospitals, there is no specific set aside for the employment of veterans. In addition, the VA letters recite a litany of existing programs for veterans employment to include: affirmative action under federal contracts; the Vocational Rehabilitation Program; the Targeted Job Tax Credit Program and the Job Training Partnership Act, Public Law 97-300, which in Part C, Title IV, sets aside five percent of specified funding for disabled, Vietnam-era and recently discharged veterans. Obviously, the in-place programs are not fulfilling the pressing need since unemployment among Vietnam veterans alone has risen nearly 100,000 in the past year. With respect to the "Job Training Partnership Act," the amount of money set aside for Vietnam veterans, disabled veterans, and recently discharged veterans is $9.4 million which is wholly inadequate. In testimony before the Senate Veterans' Affairs Committee last month, the Assistant Secretary of Labor for Veterans Employment and Training stated: "We agree with the premise of the bills, that there is a significant employment problem for veterans, particularly for Vietnam-era and disabled veterans and that new and effective job training approaches for these veterans must be developed..." and, contradictorily, "...we do not favor passage of this legislation since we feel it is not necessary."

Need, like beauty, Mr. Chairman, is in the eye of the beholder. For the more than 800,000 Vietnam veterans seeking employment and the unknown number of older veterans out of work, the need is very great and, indeed, urgent. The VFW urges in the strongest possible terms that this $150 million be appropriated and, further, that when conferees are appointed, they prevail upon their counterparts in the House of Representatives to do likewise.

In summary, Mr. Chairman, the Veterans Administration budget for the fiscal year 1984 as set forth in S. Con. Res. 27 is a very good budget, particularly with the increased funding for a veterans jobs program and the addition of $5.7 million in medical and prosthetic research, and the VFW supports its passage.

Before closing, Mr. Chairman, permit me to take the opportunity to express the appreciation of the Veterans of Foreign Wars of the United States to this Subcommittee and the Appropriations Committee for over the years having demonstrated genuine compassion and concern for our nation's veterans and, also, your understanding with respect to our concerns and recommendations.

Thank you.

RESOLUTION NO. 608

NEW LEGISLATIVE INITIATIVES

WHEREAS, during the current Congress there have been efforts made to reduce federal spending and to balance the federal budget; and

WHEREAS, the Veterans of Foreign Wars of the United States has historically opposed the reduction, elimination, or erosion of earned entitlements and veterans benefits; and

WHEREAS, there is a demonstrated trend within the Congress to eliminate or reduce established veterans' benefit programs in order to provide the needed funds for newly enacted measures; now, therefore

BE IT RESOLVED, by the 83rd National Convention of the Veterans of Foreign Wars of the United States, that we strongly press the Congress of the United States to appropriately fund all new legislative initiatives rather than eliminate or reduce existing veterans' entitlements to provide funding therefore.

Adopted by the 83rd National Convention of the Veterans of Foreign Wars of the United States held in Los Angeles, California, August 13-19, 1982.

RESOLUTION No. 611

MAINTAIN VA REGIONAL OFFICES

WHEREAS, the Veterans Administration operates 58 Regional Offices, and numerous field offices; and

WHEREAS, consolidation, regionalization or elimination of these offices would create a hardship on the veteran, his widow, and orphan; and

WHEREAS, an appellant would in many cases be prevented from personally appearing in the claims procedure due to the extensive traveling and restrictions on their personal funds; now, therefore

BE IT RESOLVED, by the 83rd National Convention of the Veterans of Foreign Wars of the United States, that these offices be maintained and that no steps be taken to dismantle this system.

Adopted by the 83rd National Convention of the Veterans of Foreign Wars of the United States held in Los Angeles, California, August 13-19, 1982.

NATIONAL SCIENCE FOUNDATION

STATEMENT OF DR. CRAIG BLACK, DIRECTOR, LOS ANGELES COUNTY MUSEUM OF NATURAL HISTORY

Senator GARN. Next we would like to invite to the table Dr. Craig Black, director of the Los Angeles County Museum of Natural History.

Dr. Black, proceed, and we will be happy to place your entire statement in the record.

Dr. BLACK. Thank you, Mr. Chairman. It is a pleasure for me to have the opportunity to be here to present some testimony to your subcommittee today concerning the museums of this country and their place in the entire process of science education and other aspects of scientific activities that they place in those institutions.

I am here today to testify on behalf of the American Association of Museums and the Association of Science and Technology Centers and, more particularly, on behalf of the hundreds of museums in this country that are concerned with various aspects of science and science education. These include zoos and aquaria, arboreta and botannical gardens, planetaria, science and technology centers. Many of our children's museums are very much concerned in science education, and then finally, the many great natural history museums of this country.

Together, I would estimate that this community of museums serves somewhere between 150 and 200 million people in this country every year. This group of museums is concerned with science in, basically, two ways. First, many of these institutions carry on basic research in the sciences. These institutions house the collections that form the basis and the baseline for data on the ecology, both today and in the past, of this country and, indeed, of countries throughout the world.

It is this data that has been essential over the last 10 or 15 years to many of the projects that have looked at ways in which our environment has changed due to and as a result of various actions taken by society. Without those collections and without those institutions, we would not have the historical data against which to measure current ecological data as it comes in through various scientific research projects. These institutions also carry out very basic research in the natural sciences and the earth sciences and the social sciences.

I think it's fair to say that over the last 10 or 12 years, there has been a significant shift in the emphasis for training and for research in the natural sciences from many of our universities and colleges into the free-standing science and natural history museums of this country.

In this context, these museums have worked extremely closely with universities throughout the country. The American Museum of Natural History has had a longstanding tradition of working closely with Columbia University, with Lamont Laboratories, the Field Mueseum in Chicago has always worked quite closely with the University of Chicago and with the University of Illinois/Chicago circle.

These various activities in the realm of, say, basic research and sciences, have always competed and competed on an equal and, I think, very effective basis in seeking and receiving Federal support through the National Science Foundation.

The peer review system for basic research and for projects of this sort, we believe, is an extremely useful and valid one, and it is one in which museums and museum scientists have competed effectively over the last 15 to 20 years. However, there is another area in which museums, science museums in this country, play a very significant role in our society, and that is in the area of science education.

This is an area in which museums have, to date, not been recognized to any significant extent as making contributions which are in the main stream of public concern and which, we believe, are extremely vital as we face questions relating to science pleurisy and science competency in the future.

These museums serve the public in what we call their public program roles which are basically two: They serve in the exhibition context, and it's probably as institutions that present exhibitions that they may be most well known to members of the committee and, in many instances, to members of the general public.

However, those who have explored museums more deeply in the last 10 years have found that the exhibition and public education roles of these institutions has, I believe, changed significantly. Where you and I probably remember a school tour to a musuem, perhaps the State natural history museum in Salt Lake City—I remember them in New York; I remember them in Chicago——

Senator GARN. Unfortunately, which didn't exist until after I had finished school. It's the old libary of the University of Utah, which was still the library when I was attending college.

Dr. BLACK. I wasn't sure when that institution came into existence, but for many of us, museum visits and education programs a number of years ago consisted of being brought in as a school group, taken in the front door and then you proceeded to go on at a dog trot through the institution. You saw as much as possible. There was really very little content. There was a lot of what we might call exposure, but there was never a great deal of focus on particular matters of scientific or educational concern.

That situation, I think, has changed almost completely now in most of our science museums. Today, we focus not on exposing the school tours to everything that we house in our institutions or to all the exhibitions that we have, but rather, we focus on particular topics, on particular elements, on particular scientific principles which we can say a great deal about based upon the collections which these institutions house.

I'm not sure that that change in our philosophy and our approach has yet been fully appreciated in all areas of the State and Federal funding centers in terms of education programs.

But museums today are really laboratories. They are laboratories where the objects that we house, the natural objects, the biological and geological specimens, the objects that have been made by cultures both today and in the past and in addition, the objects, the tools and the mechanisms that we have developed to implement scientific discovery through technology to provide certain new opportunities for our society.

These objects are housed by the hundreds and by the thousands in our museums, and they form the basis from which our education programs are developed. I like to think of museums as playing an almost essential complimentary role to that that is played by the classroom in our primary-secondary schools and in our colleges and universities in that in the formal classroom situation, the emphasis is largely, particularly in the sciences, on the content, on the facts.

We can complement this in the museums by bringing forth the context in which those facts were developed and by also setting, taking concept and taking content and developing the entire exciting picture of how science developed, how it reaches certain goals, how it achieves certain facts, and then we can take that a step further—which again, I do not believe we have done well in our education systems to date—and say a great deal about how science is then translated through technology into the variety of opportunities that provide for our well being.

I think if we are truly to be understood and enhance our ability to understand and to reason in the area of science, then we must have this complimentary of the formal education and the types of science education that go on in our variety of science museums.

It is in this public program arena, however, that science museums have largely been shut out of both State and Federal funding. There is funding available for education programing, for exhibition programing, in the arts and in the humanities. There has been not a total absence, but a very, very small amount of funding available for science museums over the last 5 to 10 years in these areas of public education and public exhibition.

We believe that it is time that the National Science Foundation take an active and leadership role in changing this situation. I am not here to urge more money and greater appropriations; I am not here to request the great infusion of new Federal dollars.

As the President said last week in his speech at Seaton Hall University, more Federal dollars will not solve the problems that we face in the educational system in this country today, at least not totally.

They will not, in and of themselves, alleviate the critical state of science understanding, of science ability in our schools, and I also think it is important to stress here that it is not just a question of science's ability and science's understanding in our schools and in our formal educational process.

I think we have developed unwittingly over the last one to two decades a growing gap between what all of us in society understand about science and the way in which we perceive science so that I think we have two problems: We have, one, a problem of how do you improve the quality of education in the sciences? How do we achieve that in the formal context? At the same time, I think we need to improve the general society's ability to understand what the scientific process is, what some of the differences are between science and technology and where some of the value systems lie in making judgments as to how one or the other is to be used and implemented.

As I said, I don't believe that the answer here is necessarily great additions and influctions of Federal funds. I think a great deal of the answer lies in looking at new ways to approach science education, to use imagination, to look at some new inventive and innovative programs that will combine what we are trying to do in our formal education system with what we have been doing, with what is available in the more public education system which is our museums, and actually, there are probably other avenues that should be explored in that context.

I believe we need some leadership in recognizing some new experimental and innovative science education programs. Here, I believe the National Science Foundation can take and should take a leading role. Their charge and their mission is quite different than that of the Department of Education. The Department of Education's mandate is to support the more formal types of education and the institutions that provide that type of training.

The National Science Foundation's mandate is to, first, promote basic research and research activities in this country, and as I indicated, museums have competed quite well with universities, museums scientists compete quite well with their university colleagues in those processes within the National Science Foundation. But the National Science Foundation has an opportunity, through its education arm, to look at the new and the innovative and the imaginative programs that are going on in our museusm and to open up those programs to competition just as they do their basic research programs, to peer review, but with a clear understanding that museums and science museums, natural history, technology, children's museums have and should have a role to play in that process, that the education that goes on in science is not something that is restricted to a primary or secondary school or a university or a postgraduate classroom.

And it's in this context that we urge the National Science Foundation, as it looks at its new and developing programs in science education, to insure that the educational components of museums are able to play the same role as their research components play today.

Thank you very much, Mr. Chairman.

Senator GARN. Thank you very much, Doctor. I appreciate your comments on the nontraditional activities of museums and how they can contribute to a better scientific appreciation for and understanding of science. One of the real fun duties that I have back here is I am on the Board of Regents of the Smithsonian, and that is a lot more fun than being a Senator, but if I weren't a Senator, I wouldn't be on the Board of Regents, so I have to put up with the Senate in order to work with the Smithsonian.

So I very much appreciate your willingness to be here today. Thank you.

Dr. BLACK. Thank you.

[The statements follow:]

STATEMENT OF DR. CRAIG BLACK, DIRECTOR, LOS ANGELES COUNTY MUSEUM OF NATURAL HISTORY, ON BEHALF OF THE AMERICAN ASSOCIATION OF MUSEUMS AND THE ASSOCIATION OF SCIENCE-TECHNOLOGY CENTERS

I want to thank you for the opportunity to testify on an issue of the deepest interest and concern to me and my colleagues in museums - the crisis in math and science education. As a scientist, a parent and the administrator of a museum dedicated to research and public education, I confront the problem of declining math and science competency among school children, young adults and the general population each day, and have worked with others in the museum community to expand and improve the contributions that museums can make to the solution of this problem.

I testify today on behalf of the American Association of Museums and the Association of Science--Technology Centers, national organizations with a combined institutional membership of 1,700. AAM and ASTC represent natural history museums, aquariums, science centers, planetariums, nature centers, zoos, botanical gardens, and those museums, such as children's museums, with a strong commitment to science and math education.

There are two things I wish to accomplish today. The first is to provide this committee with a better sense of what museums do in the area of science and math education. I want to dispel the common assumption that museums are merely exhibition spaces and destinations for family and school outings. I want to communicate the breadth of services we provide to schools, parents and communities, and the extraordinary opportunities we present for stimulating and effective learning.

My other goal is to testify convincingly on what is clearly a major role for the National Science Foundation in solving the problem that faces us. Although that problem is large and Congress is in the process of developing education bills that will address it broadly, the National Science Foundation has a unique role to play in this area, one that requires more leadership, commitment and imagination than it does large sums of money.

For those who have not spent much time im museums of late, they have changed enormously in the last ten to fifteen years. The changes are particularly noticeable in science museums. There are a number of reasons for this. The first is the enormous scientific and technological advances that occurred in the last two decades. Space exploration, new knowledge about the earth and its history, changes in energy production and need, the new insights of basic research into the nature of the atom, and the astounding growth of computer technology, all contribute to a revitalized science museum and an increasing public demand for information about events with profound implications for our daily lives. This natural expansion has coincided with an increased reliance by local schools on museums for supplemental programs in science and math, for museum programs that complement the curricula, for teacher training, and for the "hands-on" experience in computers and laboratory work that the schools, for economic reasons, are often unable to provide. The results of these pressures have been an increase in services and a level of success in math and science education that is uniformly high.

Museums have succeeded in promoting stimulating and effective education programs in math, science, and computer principles because they can risk innovation and experimentation. The have highly trained staff to design and implement programs, and they enjoy widespread support within their communities. Museums have an unusual advantage when it comes to education. Children enjoy museums; museums are inviting and stimulating places for them to learn. To paraphrase Frank Oppenheimer, director of the Exploratorium in San Francisco, no one ever flunked museums. The level of motivation with which museums are approached is the key to the quality of the learning that takes place in them, and in other informal education settings. Similar effects are achieved when museums move into the schools through traveling computer vans, suitcase exhibits, educational kits, visiting curators and museum scientists.

Increasingly, museums are offering opportunites to teachers to learn more about subjects in math and science and effective methods of teaching. They are also helping parents overcome their anxieties about math and science, fears that are too quickly transmitted to their children. In the informal setting museums offer, adults can begin to see learning in math and science as a slope that is ascended step by step rather than a sheer wall that requires special skills or talents to scale. This dual role of teaching adults--parents, teachers and general public--and teaching children makes museums unique resources in the education process.

The many ways in which museums contribute to math and science education are described in great detail in the testimony developed by Elaine Heumann Gurian, director of the exhibits center at the Boston Children's Museum, for the House Appropriations Subcommittee on HUD and Independent Agencies. I have included it, for the record, with my statement. I have also included a reprint of an article, Memoirs of a Bubble Blower, by Bernard Zubrowski, also on the staff of the Boston Children's Museum, which I would urge the committee and its staff to read and enjoy. Mr. Zubrowski's experience in teaching children the wonders of science through something as simple, homely and fascinating as the soap bubble goes to the heart of the problem this committee is trying to address--how to encourage and protect the natural curiousity of children and make learning about the world and how it works a lifelong pleasure.

The NSF has an opportunity to play a powerful role in the solution of the crisis we face. First, NSF should distinguish its role from that of the Department of Education. With the numerous science education programs proposed for the Department of Education, NSF should avoid duplication and not attempt efforts similar to those the Department of Education will be authorized to carry out. Instead, NSF can establish a leadership role in science and science education that is impossible for any other agency. NSF can encourage and fund innovation. It can illustrate and capitalize on the connection between supporting research in the science and fostering the devlopment of human potential. Finally, it can assure quality by its selection of exemplary projects through the peer review process.

In consideration of this potential for national leadership, NSF should adopt programs that:

1. bring scientists and educators together encouraging research related to learning, especially in settings outside the schools. A great deal of science and technology education takes place outside of schools yet little research has been done in non-traditional settings. In recognition of the popularity of science museums where science is fun as well as educational, the National Science Board Commission advocates examining the instructional approaches used at such institutions and where appropriate applying them to the classroom. 1.

2. foster the broad understanding and appreciation of science among the general population. Programs that reach large audiences such as public television should be linked to the tangible "hands-on" learning provided by science museums. In Chicago at the Museum of Science and Industry, collaboration with 3-2-1 Contact resulted in the development of student materials that related specific museum exhibits and programs to the weekly themes of the television program. This provided a needed experiential component to extend the television learning.

3. support the formal educational system by risking innovation and assuring dissemination of results in instructional method, curriculum development, and use of new technologies.

4. insure motivation and training for special audiences such as minorities, women, handicapped, and gifted.

Active pursuit of such initiatives can help NSF become an important leader and catalyst in the national effort to improve the competency of children and adults in science, math, and the effective use of technology. This role is a vital complement to the agency's other mission of science research.

Recommendations

As we all know the educational problems that this nation faces are vast and complex. They cannot be solved overnight. There are ways to get started. The members of the Association of Science-Technology Centers and the American Association of Museums make the following two recommendations for adoption in the NSF appropriations legislation for FY84:

1. Provide wide eligibility for museum participation whatever the program.

   Museum capabilities are diverse, encompassing public motivation and awareness, teacher training and support for the educational programs in schools. NSF's high quality peer review process should allow the broadest possible eligibility for potential grant recipients. Unlike the formula allocation system of the Department of Education, NSF grants fund solely on merit so the broader the applicant pool, the greater the potential for innovation and quality. Often museums and other groups not listed as specifically eligible for a program are assumed and treated as ineligible. A conscious effort to include museums in the eligibility wording of legislation would prevent this exclusive interpretation.

2. Authorize a program for development of exhibitions and related activities, such as teacher training, materials for the classroom and educational community events.

   A major exhibition reaches a large audience because it is promoted widely and involves many related programs and groups in the community. Renowned speakers are assembled to lecture; special demonstrations and planetarium shows are developed; activities and classroom visit guides are written for schools; teacher training sessions are planned; local television shows feature segments on the exhibit topic; other museums schedule related shows. All of these extensions of the core exhibit enhance the educational impact and the level of community participation. Major exhibitions with public support for the initial development also attract significant matching support from the private sector.

In summary, museums are prepared to extend their science program efforts to help in meeting the national science education needs. As the new science and engineering education role for the National Science Foundation is defined, we urge that museums be widely eligible to participate and that a program be authorized to develop major exhibitons and related activities.

Thank you for the opportunity to testify. We hope it is helpful as you consider the role of the National Science Foundation.

1. Today's Problems Tomorrow's Crisis: a report of the National Science Board Commission on Precollege Education in Mathematics, Science, & Technology.

[From Terra, spring issue 1983]

FROM THE DIRECTOR, DR. CRAIG C. BLACK

For many months now we have heard a growing public clamor about the state of science education in our society. Congress has been concerned about government's role in enhancing science education in secondary and college curricula. We are told of declining mathematical abilities of graduating high school seniors as reflected in college entrance examinations, and the decline of science literacy has been featured in our weekly news magazines and in the daily press.

Science News (February 12, 1983) reports that new federally funded programs in the National Science Foundation will seek to improve the teaching of science and mathematics in grades six through twelve by recognizing and rewarding outstanding high school teachers in these subjects. The NSF program, or a similar program in the Department of Education, will also provide partial funding for training teachers to improve their science teaching skills.

There has at times been heated debate as to whether the responsibility for enhancing science education lies at the federal or local levels. Fortunately, it now appears that a partnership is evolving with the federal government supporting efforts to improve science education in concert with local and state initiatives.

Unfortunately, most of the debate and concern has centered on the decline in mathematical skills, not on the broader aspects of science education, and it is centered on performance, not on basic understanding of science and scientific method. I say unfortunately because we live in a society that has profoundly confused about what science is, how scientists work, and the difference between science and technology. As more and more people know less and less about science and how it is pursued, we have a more sceptical, uneasy and, at times, fearful public.

While our primary and secondary schools have a central role to play in the teaching of mathematics, a skill essential to everyday life as well as to the pursuit of scientific careers, they must also educate students who will never be scientists but who must understand what science is and what scientists do. Without general public understanding, we can only expect a continuing decline in public support for scientific endeavors. Here, I believe, science museums can and should also play a critical role.

Museums have long considered themselves educational institutions. We are known for "school tours," where literally hundreds of thousands of primary and secondary school students are exposed to museum education classes every year. In the past such tours or classes were all too often "exposure," not teaching--an event, not an educational experience. However, in the last decade museum tours have increasingly become true educational experiences with content--not coverage of everything in the exhibit halls--being stressed.

While the schools can and must teach an understanding of science and must develop the requisite skills for those students who wish to undertake scientific careers, museums have the opportunity to teach the how, what, and why of science. Students can participate in the process of observation, the formulation of tentative statements, or hypotheses, based upon these observations, and the testing of these hypotheses through prediction. They can discover the immense complexity of the organic world and how it differs from the simpler nonliving systems of physics and chemistry. Utilizing museum exhibits and collections, they can be brought into the process of science. Mathematics lends itself to the classroom, biology, chemistry, and physics to the laboratory. What better laboratory than a museum of natural history or science and technology?

Students must learn that science is the discoverer, the pursuer of knowledge, the elucidator of the principles of our universe. Science is not technology, but without science there is no technology. Technology is the application of scientific discovery for the use and, ideally, the benefit of man. The atomic isotope Uranium-235 occurs in nature, its atomic structure and properties are known scientific facts. Of all the several hundred known atomic isotopes, U-235 is the only one that is spontaneously fissionable.

This information lies in the realm of scientific discovery; the application of this information to the development of nuclear power plants for energy use lies in the realm of technology.

Science tells us that natural ecosystems are generally composed of myriad varieties of plants and animals, with diversity the rule in any single system. Through scientific inquiry we also know enough about plant physiology and genetics to be able to greatly increase the growth and productivity of many plant species. Using this knowledge we can transform a land area that may support hundreds of species of plants and animals into acreage that will yield a large quantity of a single grain or fiber. However, scientific studies show that such single crop planting quickly destroys the natural soil nutrients, those maintained by the normal diversity of species, and continued crop harvesting can only be sustained through massive applications of nitrogen and phosphate fertilizers. Whether to replace diversity with food crops then becomes a question of social values. Science provides the information; technology provides the mechanisms; society makes the decisions.

A society that understands science and the scientific process and that knows the relationship between science and technology is a society that is prepared to make decisions concerning the use of scientific knowledge for social needs. While our schools will continue to play a central role in this educational process, our museums must step forward and shoulder some of the responsibility. We, in museums, are in a unique position to provide access to the process of science for peoples of all ages. This is an endeavor in which the Natural History Museum of Los Angeles County must become totally involved.

STATEMENT OF ELAINE HEUMANN GURIAN, DIRECTOR, EXHIBITS CENTER, CHILDREN'S MUSEUM, BOSTON, ON BEHALF OF THE AMERICAN ASSOCIATION OF MUSEUMS

On behalf of the American Association of Museums and of all museums with science programs, the Boston Children's Museum is pleased to present testimony before the House Appropriations Subcommittee on HUD and Independent Agencies. We hope to vividly address the role museums can and do already play in science education, and to demonstrate the importance they can have in increasing science and technology literacy among the general population. We recommend that as the National Science Foundation's new role is defined that they will direct their focus on filling the important science education gaps which cannot be addressed by Department of Education block grants, and that museums be broadly eligible to participate in those National Science Foundation efforts.

Restatement of Need

We heartily concur with Congressional recognition of the critical need for improved science and math education for the general public. Like many who have already presented legislation or testimony, we recognize the need to:

-- Present science to children very early in their lives. Reseach indicates that the "mass science and math avoidance syndrome" is set by the time children are 10 years old. Museums provide successful preschool experiences every day.

-- Reach children and parents together in the home and outside the classroom in settings where they can work together. Museums are a popular family destination.

-- Develop better curriculum, better training and retraining of teachers, and through collaborative programs support the work of schools and universities in giving students access to materials and equipment unavailable in the classroom.

-- Familiarize the general population with science, math and technology so they can be supportive of national science education needs, and so they can make better-informed choices on policy issues that arise with new applications of science and technology. Museums serve as translators of complex science information to the lay public.

-- Reach out to traditionally underrepresented groups with science education, information and opportunities in order to broaden the pool of those who will and can choose careers in the sciences.

Museums are uniquely able to address all of these needs with a depth of resources not available in any other type of institution. The National Science Foundation also has unique opportunities to provide a leadership role in this process. While Department of Education block grants can infuse science education funds proportionately into the schools, the National Science Foundation can use discrete funds to focus on highly visible, innovative projects that become models for replication across the country. The National Science Foundation rightfully enjoys a sound reputation for the innovative works it has funded. Many of the museum programs outlined below were begun with NSF funds. Since the Public Understanding of Science funds were cut there has been an enormous vacuum in the creation of new projects which meet these needs so well. We encourage the members of Congress to establish a climate in which the National Science Foundation can provide this type of leadership which cannot be given by block grants, and to make museums broadly eligible to participate in NSF funding.

The Role of Museums in Science Education

Museum-going has become one of America's favorite pasttimes. No longer dark halls with musty glass cases, museums combine collections with interactive, hands-on exhibits and programs which allow visitors to participate, to learn and to enjoy the experience.

Science museums alone serve more than 150 million visitors every year. This equals the combined annual attendance of all professional baseball, football and basketball games. The National Air and Space Museum at the Smithsonian attracts 10 million annual visitors -- about the same number who go to Disney World.[1] Add to that the visitors to other types of museums presenting science materials -- children's, youth and general museums, zoos, arboreta, and national parks -- and the numbers swell to equal almost the entire population of the United States.

But these numbers are deceptive; attendance at exhibits is only the tip of the iceberg. The breadth and depth of science-related programs offered by museums is astounding.

Who Museums Reach

Museums reach all ages and all types of people. They augment the classroom for those who are in school, and they serve those who are both too young for school and those who have completed their formal education.

EXHIBITS

Exhibits are the mainstay of museums, and they are often the focal point which brings visitors into initial contact with museum learning. While often expensive to develop and mount, exhibits reach millions of people annually, frequently serving to trigger further exploration, and therefore becoming cost effective vehicles for introducing science information to the public.

> Example: Science is only one of several major topics at the Milwaukee Public Museum, yet they are mounting a permanent science exhibit about the creation of the earth. This $2 million exhibit will have a life span of 20 years and will be seen by over 12 million people for a cost of just over 16¢ per person. Significantly, the National Science Foundation awarded $375,000 toward the cost of this exhibit. In turn, that grant generated an additional half million dollars of private support.

PRESCHOOL AUDIENCE

Infants, toddlers and preschool children have become familiar sights in museums. Since children often 'turn off' to science and math by age 10, early positive experiences gained in museums can help counteract that trend. In addition, research shows that one reason boys are more likely to move into science and math careers is that they have more opportunities and encouragement to manipulate objects. Museums can offer preschoolers of both sexes that early experience.

> Example: The average age of children whose parents are members of the Boston Children's Museum is 4.1 years. Our interactive exhibits include beginning science activities targeted to this group as well as to older visitors. This is no accident. Play is the work of children, as exploring, manipulation, discovering and testing is the work of scientists. "Playing" with a water wheel, giant bubbles and golfballs racing down various tracks promotes important manipulation and positive first-hand science experience for young children. At the same time, it allows children to begin understanding the scientific principles behind hydroelectric power, surface tension, velocity and momentum. Such exhibits allow children to gain experience with science in a volitional, open-ended manner regardless of age, sex or ethnicity and be more comfortable when such science information is presented more formally in schools.

FAMILIES

Museums are neutral settings where families go together for recreation. To paraphrase Frank Oppenheimer, Director of the Exploratorium in San Francisco, no one ever flunks museums. Museums offer one of the few arenas where children and parents can learn together. This is especially important in relation to science education because it is often the parent's lack of knowledge about or discomfort with science and technology that impedes a child's natural interest and curiosity. Where museums present opportunities for the entire family to explore together, those barriers can be overcome or ameliorated.

> Example: Recognizing the importance of reaching children and families in neutral settings, the Franklin Institute in Philadelphia now operates a "Science Bar" in an urban shopping mall.

SCHOOL SERVICES

Collaboration

Museums have worked collaboratively with local schools to present science programs both in the schools and in museums.

> Example: The American Museum of Natural History science staff conduct a science laboratory program for eight elementary schools in New York City. It is the only laboratory program for elementary schools in New York.

> Example: The Fernbank Science Center in Atlanta provides daily intensive science studies for able high school students each term. Under the guidance of the Center's expert science staff, students work with an electron microscope, a telescope, other special equipment and in the nature center.

> Example: In Boston, the Museum of Science, the Museum of Comparative Zoology, the New England Aquarium, the Children's Museum and the Audubon Society all teach science programs in classrooms through desegregation funds.

Teacher Training

Museums can and do offer good preservice and inservice teacher training in both science content and teaching strategy. Because much of the university teacher training in the realm of science and technology is aimed at secondary and post-secondary teachers, museums fill an important gap in helping elementary school generalists learn what and how to teach science in ways that avoid having children 'turn off' at an early age. Because museums work with the same age population on a daily basis, elementary school teachers often feel more comfortable with the style and practical experience museums offer.

Preservice Example: The Pacific Science Center and the Boston Children's Museum offer seminars for course credit to area elementary teachers. In addition, the Boston Children's Museum science staff has for several years taught in Boston University's School of Education.

Inservice Example: The Museum of Science in Boston was invited by the State Legislature to form a special relationship with the City of Somerville. That museum will provide training for elementary teachers in Somerville, multiple visits by students, and a special program for gifted children -- all in science education.

Curriculum Development/Materials Circulation

Kits, curriculum units, circulating materials and small exhibits produced by museums provide additional science resources to teachers and schools all over the country.

Example: The Boston Children's Museum, founded 70 years ago by classroom and university science teachers, began circulating artifacts, objects and curriculum ideas before exhibits were opened to the public. We now circulate about 120 science kits each year which provide extended classroom experiences for about 35,000 students.

Example: The Denver Children's Museum circulates a mobil exhibit on metrics which is used by an entire school during its two-day stay.

Example: The North Carolina Museum of Life and Science sends instructors along with inflatable, classroom-sized planatariums into schools throughout that state.

Example: The Space Center at Alamagordo, New Mexico, and the Pacific Science Center in Seattle operate computer vans that go to schools and other sites.

Example: The Milwaukee Public Museum's circulating library of 17,000 films is the largest museum holding in the country, and reaches an annual audience of 10 million people. Fifty per cent of these films are about science: 5 million people a year, mostly students, increase their knowledge of science and technology through this program.

EXTRACURRICULAR

Museums have also developed an exciting array of model science programs serving school-age children in non-school settings.

> Example: In Ohio, the Columbus Science Center offers weekend science camps to 35,000 youngsters from community groups each year.
>
> Example: The Maryland Science Center offers a successful weekend science series for highly motivated students. The program, taught by parttime instructors, many of whom are Johns Hopkins professors, provides accelerated science instruction for participants who rate and rank the sessions.
>
> Example: Chicago's Museum of Science and Industry runs a weekend program tied to themes presented in the popular public television series "3-2-1 Contact".
>
> Example: The Museum of Science and Industry also offers computer courses for everyone over the age of 10. These courses are so popular that 35 separate classes have been scheduled for this spring alone.

Extracurricular programs also provide avenues for youngsters seeking career choices. The Exploratorium uses adolescents as Explainers, and the Indianapolis Children's Museum runs a similar program.

This direct experience often shapes the career choices of young people.

> Example: James Baird, now a research ornithologist and vice president of the Massachusetts Audubon Society, spent his summer vacations in the Boston Children's Museum's bird watching/study program.

UNDERREPRESENTED POPULATIONS

Many museums provide extensive outreach programs for minorities, girls and the disabled, understanding the importance of enfranchising these groups that have been traditionally underrepresented in the sciences.

Example: The Lawrence Hall of Science at Berkeley has developed workshops and curriculum materials for their EQUALS program to give women students career guidance and incentives to elect mathematics classes in junior and senior high school.

Example: The Hall's Mathematics & Engineering Science Achievement (MESA) program provides encouragement for minority students to pursue science careers.

Example: The Exploratorium conducts workshops for parents, teachers and administrators of disabled children, and the Pacific Science Center has curriculum guides and loan kits for teaching marine science to visually impaired children.

ADULTS

Programs for adults are equally ambitious.

Example: The Carnegie Museum of Natural History in Pittsburgh inaugurated semester-long science courses for adults. Area universities offered course credit, attesting to the excellence of the content, and soon more than 10,000 people registered annually, making the museum the second largest institution of higher education in the area by size of enrollment.

Example: The American Museum of Natural History offers the Margaret Mead Festival each year. This 4-day anthropological science film series draws 8,000 people annually.

Adults are often attracted to volunteer jobs in museums as a tool for their own learning.

Example: The Field Museum in Chicago trains hundreds of volunteers in science information and exhibit activities. The newer and smaller Discovery Place in Charlotte, North Carolina, has 250 adult volunteers, many of whom are there as much to learn about science and nature as well as to pass their knowledge on to others.

RESEARCH

Finally, museums have always been contributors to science and science education in another important way. Museums are the site for some of the most important scientific research conducted in the United States. Their scholarship and research serves the scientific community, the museum profession and the public through improved quality in exhibits and interpretation.

How Museums Promote Science Education

Museums can and do serve a function that schools and media cannot provide, and are, therefore, an important adjunct to formal learning programs as well as parallel learning environments. Museums promote science education because they contain objects, artifacts and specimens, allow for hands-on manipulation and experiments, and have scientifically trained staff to provide additional education.

Many educators believe that American society is in transition, and that informal education will become the primary learning method in the near future. Television, magazines, home computers and, of course, museums, all offer informal and well-used learning opportunities.

Museums offer open-ended exploration: there are no bells to announce the ending of a class; no commercials nor the 30- or 60-minute time frames that limit television programs. Visitors can arrive when they like, work at their own pace and for as long as their interest is engaged. Museum staff are often on hand to provide help, information or additional activities and resources for the intrigued visitor. And unlike classrooms or television programs, visitors can come back and repeat their experiences as often as they choose.

Summary

-- Museums serve all ages on an ongoing basis. Preschoolers who attend museum science exhibits and programs can be better predisposed to science education when they reach school; school children who use museum exhibits, courses, workshops, curriculum units, special programs, circulating exhibits, collections and research information gain insight, knowledge and skills not generally obtainable elsewhere.

-- Adults continue their learning throughout life with museum programs and volunteer opportunities, thus becoming better informed about science and related public issues and needs because museums have translated the complex information.

-- Museum educators can support and enhance teachers' knowledge about science and ways to make science interesting for students.

-- Curricula developed by museums incorporate up-to-date information, activities, objects and multimedia materials presented in engaging ways.

- -- Collaborative programs with schools, industry, community groups and governmental agencies have been successfully initiated and maintained by museums.

- -- Museums attract media support and attention in positive ways which in turn attracts new audiences.

- -- Museums are perceived as fun places to go and therefore learning is approached in a open, interested manner.

- -- Science programs and exhibits in museums are cost effective. Costs for major programs compare favorably with those for public television, and they reach as large an audience with the added advantage of being available for extended and repeat use.

Museum science programs are a crucial part of the science education fabric. Prior to the F/Y 1981 budget cuts, the National Science Foundation provided leadership and funding for museums to create exciting, successful model programs and exhibits which have been seen by millions and replicated throughout the country. The Foundation's highly competitive peer-review process attracted private funds for innovative projects, and like the National Endowment for the Arts, the Foundation's ability to fund and draw attention to discreet projects sparked the best efforts of museums and widespread public attention and interest.

As the National Science Foundation's new mandates are defined, we urge that they direct their energies toward filling the gaps left from Department of Education block grant programs, and that museums be broadly eligible to participate in those National Science Foundation activities.

We are grateful for this opportunity to present the foregoing information and sincerely hope it will be helpful as the Subcommittee and the Foundation begin to shape its new course.

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[1] These figures and many examples used throughout are drawn from the excellent paper presented by Bonnie VanDorn, Executive Director of the Association of Science-Technology Centers, at the Conference on Teacher Shortage in Science & Mathematics sponsored by the Teaching and Instruction Division of the National Institute of Education on February 10, 1983

SERVICES	AUDIENCE					
	Preschool	Inschool	Community Groups	Teachers	Adults	Sharing within the Museum Profession
Exhibits	x	x	x	x	x	x
Kits	x	x	x	x		
Teacher training	x	x	x	x	x	
Courses/workshops		x	x	x	x	x
Travelling Exhibits	x	x	x	x	x	
Film/lecture series		x	x	x	x	x
Camps		x	x			
Curriculum Development	x	x	x	x	x	
Library/circulating Resources	x	x	x	x	x	x
Research	x	x	x	x	x	x

[From Technology Review, Nov./Dec. 1982]

MEMOIRS OF A BUBBLE BLOWER

By Bernard Zubrowski

IN teaching science to children, I have found that the best topics are those that are equally fascinating to children and adults alike. And learning is most enjoyable when teacher and students are exploring together. Blowing bubbles provides just such qualities.

Bubble blowing is an exciting and fruitful way for children to develop basic intuition in science and mathematics. And working with bubbles has prompted me to wander into various scientific realms such as surface physics, cellular biology, topology, and architecture. Bubbles and soap films are also aesthetically appealing, and the children and I have discovered bubbles to be ideal for making sculptures. In fact, looking over the past ten years I can see a certain philosophy emerging—a sort of Zen and the art of bubble blowing.

Patterns in Bubbles

Adults tend to think of bubbles as a visual phenomenon, but I suspect children are initially more intrigued by their kinetic qualities. Soap film is very sensual as it expands, moving like Jello, sometimes with the entire bubble swaying from side to side. In the film itself, amoebalike spots swim through stratified layers of brilliant color. And there is a special quality—artistic? scientific?—in the way bubbles clump together. Though they seem to have an intricate complexity, the bubbles in a cluster actually take only two basic geometric configurations.

Such bubble behavior is featured in exhibits I've developed at the Children's Museum in Boston. In one exhibit, children generate a froth of bubbles between two plexiglass sheets spaced half an inch apart. The bubbles form a two-dimensional hexagonal array similar to a honeycomb, with three bubble surfaces always meeting along a line at angles of 120 degrees. In another exhibit, the children go a step further by creating three-dimensional clusters of bubbles that rise up a plexiglass tube. These bubbles are not as regular as those in the honeycomb formation, but closer observation reveals that they have a definite pattern: four bubbles (and never more than four) are usually in direct contact with one another, with their surfaces meeting at a vertex at angles of about 109 degrees. And each bubble in the cluster will have roughly the same number of sides, a fact that turns out to be scientifically significant.

In the 1940s, E.B. Matzke, a well-known botanist who experimented with bubbles, discovered that bubbles in an array have an average of 14 sides. That is, the "average" bubble has the shape of a 14-sided polyhedron. And that's important because 14 is the number of faces of the so-called "Kelvin cell." Proposed by Lord Kelvin in the late 1880s, this is the ideal geometric shape for enclosing space, requiring the minimum surface area and tension to enclose a given volume.

This may seem to be another of those esoteric facts scientists bandy about, yet it bears on a wide range of structures. For example, scientists have noted a consistent similarity between soap-bubble arrays and such diverse things as human fat cells, plant cells, cells of dragonfly wings, spots on a giraffe, cracks in dried mud, the way lead shot compacts, and the granular structure of metals. Peter Pearce, in *Structure in Nature Is a Strategy for Design*, says that soap-bubble arrays "can be taken as the model or type of all systems—biological, physical, chemical—in which there is an economical association of cellular modules." What I hope children will gain from playing with bubbles is the realization that there are many patterns in both natural and human-made phenomena, and that discovering and explaining such patterns is a vital part of science.

Architects have also capitalized on bubbles as what Pearce calls "an elegant demonstration of minimal principles." (Bees, nature's superb architects, demonstrate minimal principles at work: the configuration of a honeycomb contains the greatest amount of honey with the least amount of beeswax and requires the least energy to construct.) Frei Otto of Germany is a pioneer in this field, with numerous bubble-inspired structures to his credit: large balloonlike buildings and huge tents with sweeping lines. Although Otto doesn't simply build a scaled-up version of a small bubble array, he finds soap-film models useful in determining such things as the minimal surface area and the stresses that will occur in his structures. Indeed, "bubbles" are becoming an increasingly familiar sight in many cities, with tennis courts and other athletic facilities sporting air-supported domes based on the structure of bubble arrays. So soap bubbles are useful in understanding structural arrangements from the micro to the macro.

Lessons to See and Feel

Having played with bubbles for so long with children, I am convinced that educators are overlooking a rich opportunity. Manipulating soap films involves both the visual and the haptic senses; that is, what we see and how our bodies sense movement. The shapes that bubbles take are similar enough to encourage the search for patterns, yet they are always different enough to arouse anticipation. These properties prove to be irresistable to almost everyone, from children in African villages to those in suburban Boston. The educational value is that the material, not the teacher, is the motivator. This doesn't negate the teacher's role, but suggests that here is something worth exploring for its own sake.

These qualities were dramatized for me as I blew bubbles with a blind child. He would wet one hand with soapy film and then, by blowing through a straw, would form a bubble on his hand. He could sense when the bubble began forming and how big it grew. And when it broke, the warm air in the bubble would disperse—a clear indication that it was gone. The boy grew excited each time a bubble expanded to cover his hand, and afterward he exclaimed that he had never experienced bubbles so large.

In another instance, I videotaped children playing with the exhibits in the Children's Museum and observed a girl who spent 45 minutes with the same contraption. It was simply some sticks and string that, when pulled out of the soapy water, made a two-by-three-foot film. I discovered that the girl developed a repertoire of manipulations that produced a variety of curved surfaces and geometric shapes. Though I am sure she could not have explained exactly what she had generated, her face and gestures indicated deep concentration and satisfaction.

Geometry in Action

On a conceptual level, bubbles can help illustrate a variety of mathematical relationships. In fact, mathematicians have studied the principles governing the geometry of soap films for at least two centuries. For younger children, bubbles and their arrays serve as vivid examples of many geometric shapes, such as the sphere, hemisphere, pentagon, and hexagon. Creating and feeling these shapes is much more dramatic than simply seeing them portrayed two-dimensionally in a drawing. With older children, bubbles will spark discussions of concepts such as angles, surface areas, perimeters, and volumes of various geometric shapes. For example, by making a bubble grow larger they can begin to see the relationship between volume and diameter—often a difficult concept to convey—and they can make direct measurements to confirm their observations.

Indeed, I feel a bubbles "curriculum" could be developed that would span the educational time line from preschool to postgraduate. Students can return to bubbles time and again and delve more deeply into their geometry. This approach to learning may be quite different from conventional methods but is just as valid. Teachers usually explain concepts and then try to illustrate them through demonstrations or experiments. But with bubble blowing, the concepts arise out of the materials—much closer to the way we learn in everyday life. And all the while students are working with a beautiful and intrinsically interesting phenomenon.

I have yet to mention all the possibilities that stem from a soap film's interaction with light. Only by practice does a child develop the perceptual skills important in cognitive growth. Playing around with soap film—watching how the patterns of colors change in subtle ways—is a pleasurable way of exercising such skills. And aside from encouraging their aesthetic sensibilities, children can learn about the phenomenon of light interference. One interesting experiment is to make a film in a closed container and let it sit for an hour or so. The liquid will gradually evaporate, leaving a film that doesn't reflect any light. Nothing like this can be seen outside of a laboratory!

Underlying all these educational possibilities is the poetry of bubbles, which can provide philosophical insight into life itself. A bubble isn't a bubble if it lasts for a long time—part of its fascination is that you never know when it will pop. If you try to "capture" bubbles, by taking their picture or enclosing them in a bottle, you have a different kind of experience. Some of the best moments in life are like that. A festival, a play, a concert is exciting and wonderful partly because it is short-lived. The first moments of love, an intense conversation with a friend, the birth of a child are there and then gone. We can't hold on to them, even though many of us try. Blowing bubbles is a continual reminder that we would do well to savor those fleeting experiences.

Reforming Science Education

Now, I certainly encourage everyone to blow bubbles. But my greater concern is the education of children. Too much of their formal education is dull and rote—the learning of formulas and methods. Some of this is useful and necessary, but it often dominates the school day and most of the school year. Teachers often devote little time to the fascinating human-made and natural phenomena right around us. Exploration just for its own sake, and manipulation just because something is beautiful and fun, seem to be left at the school door.

For example, I once tried out some of my ideas in a suburban school system noted for its innovative and enlightened programs. In one school, the principal put me in a basement room more like a closet. Not only was it out of sight, but I suppose it was also out of smell: the odor of dishwashing soap tends to hang around, no matter how well one washes up afterward. And many of the teachers got curious looks on their faces whenever I talked about my "math" class.

But curiously, both teachers and parents look much more favorably on bubble blowing at the Children's Museum. Everybody is always very enthusiastic during special programs for visiting school children. And parents usually encourage their children to get involved, often asking how bubble blowing can be done at home. I have seen this happen with other "unconventional" educational activities—there is a tolerance for "frivolous" activities when done in the "proper" context. I think there is an important message here.

Recent years have seen a well-documented decline in student interest and abilities in science and mathematics—and this apparently starts early on. In one study, for example, nearly half the third-grade students interviewed said they did not want to take more science. Only a fifth of the eighth graders expressed a positive attitude toward science courses, and this percentage remained constant throughout high school. But the students said they liked science when they learned about it outside school—through museums, planetariums, "marine worlds," and the like. Maybe these places are onto something.

Perhaps schooling and play are incompatible, especially when it comes to playing with messy materials. If so, we ought to provide other opportunities for children to keep alive their fascination and wonder. After-school child-care programs offer such opportunities. However, I'm not convinced that education can't be more fun. The joy, as well as the learning, that I've seen come from blowing bubbles tells me that we need to reawaken the spirit and the energy that went into reforming schools in the 1960s. If we encourage a basic sense of play, the work of school will provide more lasting rewards. ☐

ENVIRONMENTAL PROTECTION AGENCY

STATEMENT OF JAMES M. PEIRCE, PRESIDENT, NATIONAL FEDERATION OF FEDERAL EMPLOYEES

Senator GARN. Next I would like to invite to the witness table Mr. James M. Peirce, president of the National Federation of Federal Employees.

Mr. Peirce, please proceed and we will place your entire written statement in the record.

Mr. PEIRCE. Thank you, Mr. Chairman.

I have a summary statement here that I will present, and on my left I have Patricia Thomas, my assistant legislative aide.

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to present the views of the National Federation of Federal Employees on the proposed fiscal year 1984 budget for the Environmental Protection Agency and the Veterans Administration. NFFE represents many VA and EPA employees throughout the country, and we are extremely concerned about the funding level for these two agencies.

Created during the Nixon administration, the EPA has been responsible for major improvements in the quality of the environment. EPA regulatory programs have helped reduce levels of carbon dioxide, lead, sulfur dioxide, and smoke in the air. Since the Reagan administration has taken office, however, the EPA budget has been slashed and its operations severely hampered. For example, funding levels for pollution research and control are slated for drastic reductions.

Research and development accounts would sustain a 28-percent cutback in budget outlays and abatement control and compliance programs would sustain a 30-percent reduction over fiscal year 1982 levels. Total EPA spending would fall 20 percent from fiscal year 1982.

One of NFEE's primary concerns is with the proposed cutbacks within the EPA's operating budget. Under the fiscal year 1984 budget request, this amount would be cut by about 30 percent from fiscal year 1981 levels, which would lead to a reduction in personnel levels of over 20 percent. The result would be a workload for the remaining employees and serious difficulty in carrying out the Agency's mandate.

Fortunately, the need for increased funding and personnel levels for the EPA has already been recognized by both the House and Senate. The House budget resolution, H.R. 91, highly recommended to help it meet increasing workloads. Last week, the Senate also acted on the first Concurrent Budget Resolution and agreed to recommend funding levels which would bring the Agency's budget closer to fiscal year 1981 levels.

We hope this subcommittee will also recognize the need for additional funding to restore personnel levels and to appropriate if necessary funds to fully carry out the Agency's responsibility.

NFFE is also concerned about the Veterans Administration and its commitment to quality care for the Nation's veterans. Unfortunately, the fiscal year 1984 budget request submitted by the President does not appear sufficient to meet most of the agency's needs. Although the

VA's budget justification indicates that the total number of personnel is scheduled to increase by approximately 1,900 positions next year, the figure is deceiving.

For example, the Department of Medicine and Surgery is slated to receive an additional 2,306 positions while the Data Management and Telecommunications Department may lose 28 positions and the Department of Veterans Benefits would lose 41 positions.

We hope the subcommittee recognizes that the activities scheduled to lose positions are essential to the efficient functioning of the agency. Reductions in personnel levels within the VA will ultimately harm the agency, and their impact could have negative repercussions for all personnel served by the agency.

In order to reduce work backlogs caused by low personnel levels and to meet increasing demand for service, the Veterans Administration could be forced to contract out some of its responsibilities to the private sector. Request for a $2 million appropriation for cost comparison studies within the DM&S is an indication of the administration's intent to rely upon contractors for services.

Fortunately, the Congress enacted legislation last year, Public Law 97-306, to provide greater protection from the DM&S from unnecessary contracting out. The Employment Amendment of 1982 limited conversion of direct patient care to the private sector and placed restrictions on the contracting out of other medical care activities.

The National Federation of Federal Employees frankly supported these restrictions to insure quality medical care for the Nation's veterans, but we are still concerned at DM&S. Functions not directly associated with patient care could be subject to unecessary contracting out.

We, therefore, hope that the subcommittee will insure the protection of medical care by denying the administration's $2 million request for cost comparisons. That concludes my statement, Mr. Chairman.

We would be glad to address any questions.

Senator GARN. Thank you, Mr. Peirce.

I understand your concerns about the level of EPA's operating budget. As you know, it is sometimes difficult to get a fix on the level that is proper. On the one hand, you have increased responsibilities for EPA, and on the other hand, you have increases in productivity.

Do you have any quantitative data you could supply the subcommittee that would indicate where that balance occurs?

Mr. PEIRCE. I think that is a very ticklish question, Mr. Chairman. We do know that the morale at EPA is extremely low, and I think you can understand that. No doubt, this has impacted on productivity.

I would say, though, however, through our people that we represent at EPA, we will attempt to get what we can and supply it to you.

Senator GARN. Thank you very much. We appreciate your willingness to be here today.

[The statement follows:]

STATEMENT OF JAMES M. PEIRCE, PRESIDENT, NATIONAL FEDERATION OF FEDERAL EMPLOYEES

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to present the views of the National Federation of Federal Employees on the proposed fiscal year 1984 budget for the Environmental Protection Agency. NFFE represents many EPA employees throughout the country and we are, therefore, extremely concerned about the Agency's funding level.

According to the administration's national needs statement included within its budget submission, the Federal Government insures responsible management and conservation of natural resources held in common-air, water, and public lands. Through the administration of direct Federal programs and financial assistance to State and local governments, the Environmental Protection Agency is charged with preventing the pollution of air, water, and land and with protecting the overall public health. Created during the Nixon administration, the EPA has been responsible for major improvements in the quality of the environment. EPA regulatory programs have helped to reduce levels of carbon dioxide, lead, sulfur dioxide, and smoke in the air. In addition, many major waterways are far cleaner than they were a decade ago. On the whole, the EPA's record has been a good one.

Since the Reagan administration has taken office, however, the EPA budget has been slashed and its operations severely hampered. Under the management of former Administrator Anne Burford, budget cuts and policy changes relaxed pollution enforcement. Increased emphasis was placed on the States to clean up pollution regardless of their ability to do so, and the EPA focused more on the voluntary compliance of industrial polluters in adhering to environmental regulations. As a result of these budget cuts and policy changes, the American public, the media, and Congress have all questioned the ability of the embattled Agency to continue to monitor and resolve environmental problems.

Within the Agency itself, morale has reached an all-time low. The job uncertainty inherent in budget cutbacks has created widespread resignations. Attrition rates in some offices has reached at least 20 percent as highly experienced professionals are leaving the Federal workforce for employment in the private sector. Yet, the Agency's responsibilities must still be met. The reduced workforce cannot adequately complete the EPA's mission and the environment cannot be fully protected. Industrial polluters have had widespread opportunities to abuse environmental protection laws.

The administration's scaled-back budget proposal seems to indicate that there is a reduced need for environmental regulation, that most of the Nation's pollution problems are, or will, soon be solved. Congress, however, has recognized the continuing and expanding need for the protection of our natural resources. New legislation has been introduced during this session to reauthorize or increase enforcement in several areas. For example, a 3-year study by the Office of Technology Assessment released on March 16 found that several of the Agency's hazardous waste control programs did not assure consistent nationwide levels of protection for human health. Bills have, therefore, been introduced to reauthorize the Comprehensive Environmental Response Compensation Liability Act and to strengthen the Resource Conservation and Recovery Act which regulate hazardous wastes. If this legislation is enacted, the Agency will need the funds and personnel to successfully administer it.

Nevertheless, the administration's budget request this year once again ignores the Federal Government's expanding role in environmental protection. By changing policies and management practices which have worked in the past and by severely reducing personnel, the administration has switched the Agency's emphasis away from discovering new problem areas and has substituted a myopic perception that the Agency has already identified all environmental problems. For example, funding levels for pollution research and control are slated for drastic reductions. Research and development would sustain a 28-percent cutback in budget outlays next year, dropping from $197,339,000 in fiscal year 1982 to $140,764,000 in fiscal year 1984. Abatement, control, and compliance programs would also be cut by almost 30 percent from fiscal year 1982 funding levels—$523,772,000 in fiscal year 1982 compared to $366,359,000 in fiscal year 1984. Total EPA spending would fall 20 percent from the fiscal year 1982 level of $5,083,319,000 to $4,101,504,000 in fiscal year 1984.

The administration's budget also assumes that State and local governments will take on a larger share of environmental regulation. Yet EPA grants to States and local environmental agencies would be reduced by almost 25 percent in fiscal year 1984. Funding would fall to $172.8 million from the fiscal year 1983 level of $233.1 million. Many States do not have the trained personnel or the financial resources to carry out environmental regulation and they need continued assistance from the EPA.

NFFE is deeply concerned with the administration's proposed cutbacks in the EPA's operating budget. This account provides the salaries and expenses of agency employees. Under the fiscal year 1984 budget request of $948.6 million, the operating budget would be reduced by about 30 percent from fiscal year 1981 levels of $1.35 billion. As a result, personnel levels could be reduced by over 20 percent from fiscal year 1981. The administration has recommended a total of 9,655 workyears in fiscal year 1984 compared to a level of 12,535 in fiscal year 1981. The result would be a work overload for the remaining employees and serious difficulty in carrying out the Agency's mandate.

The need for increased funding and personnel levels for the EPA has already been recognized by the House of Representatives. The House Budget Committee's report on the First Concurrent Budget Resolution (H. Con. Res. 91) noted that, "The workload for EPA has doubled while funding has steadily declined from the fiscal year 1981 level. . . . Congress has directed EPA to take on greatly increased responsibilities through revisions in the Clean Water, Clean Air, and Safe Drinking Acts. The Agency has estimated that under the administration's proposed fiscal year 1984 funding level of $0.95 billion, it would take years to inspect and license the currently active hazardous waste sites." The budget resolution, therefore, assumes a funding increase of $200 million in budget authority and $150 million in outlays above fiscal year 1983 levels. We hope the subcommittee will meet the spending targets recommended in H. Con. Res. 91 and appropriate the desperately needed funds for personnel and operating requirements.

That concludes my statement. I will be happy to answer any questions.

STATEMENT OF FATHER T. BRYON COLLINS, SPECIAL ASSISTANT FOR FEDERAL RELATIONS, GEORGETOWN UNIVERSITY

Senator GARN. Father Collins, we are ready for you. We are running ahead of schedule, and you walked in at just the proper time.

Father COLLINS. Thank you.

With me is my assistant, Fred Rose. We are here, Senator, to ask the intercession of your committee on a problem that teaching hospitals have wherein they cannot use advanced technology equipment and have that equipment covered by the insurance programs of hospitals, specifically, the one for medicare and medicaid.

I would like to ask the committee's assistance in trying to solve this for some 60 medical center hospitals in the United States by doing a pilot program wherein we would use an instrument called nuclear magnetic resonance machine that takes the place of X-ray. It's on the market. In fact, the VA hospital, one of the VA's hospitals, has it.

It is presently a research machine and it costs about $2 million. My first proposal would be to ask the committee to consider putting funds toward the purchase of this. Georgetown would put up half. We would ask, since under the auspices of NSF which has an equipment program, specifically, for research equipment and then use that instrument as a method of working with Secretary Heckler's two branches that are involved—the NIH, National Institute of Health, and the Health Care Financing Administration.

However, I have another proposal to the committee which would not take any money which would ask the committee to sponsor a program under the National Science Foundation leadership to get the agencies of Secretary Heckler and ourselves to use an instrument that is safe to use in a medical center with a view toward using it in such a way that you would establish guidelines for the health care financing agency that would allow it, from the first time you used it, to be covered by insurance.

The simple illustration is the magnificient work that was done at the hospital in Utah with the artificial heart. They had to get very special permission to use that. It was not covered by any insurance. All that information in that instrument could be used by other medical center hospitals if you could use a method of charging off that use on the insurance programs.

That is an illustration of what we would be aiming at.

So, in summary, it is a problem for all teaching hospitals that as you uncover and discover various precise instruments that are safe for use in a medical center for diagnosis or treatment, you cannot use that and get reimbursed off the insurance program.

So what do you do? You go to the National Science Foundation, NIH, many other Government agencies, and ask for grants. You wouldn't have to do that if you could use a method by which there was a set of guidelines that they—under Secretary Heckler, of having insurance cover the use of this machine. That is fundamentally what our questions are to the committee.

Senator GARN. Thank you, very much, Father. Your proposal is interesting but raises some difficult questions, as I am sure you know.

First, we would have to ignore the merit-based peer review process at NSF. Second, the Congress has never earmarked NSF funds for a specific project, and your proposal would conflict with NSF's longstanding policy that does not support clinical research or demonstration programs.

Father COLLINS. I would answer those, Senator.

I don't think—see, I am not asking for that, really.

First, I am asking for any money; not to have it earmarked. What I am asking is that a procedure, that the Director of the National Science Foundation would ask Secretary Heckler and not necessarily us.

Senator GARN. I heard you use the word "intervene." I didn't know whether that was divine intervention that we should use with HHS or not.

Father COLLINS. No. As I see the way it would have to work is, there would be an invitation on behalf of the National Science Foundation to address the problem and ask Mrs. Heckler's particular agencies to meet with a view—and they won't do it, I don't think, and we have already tried the agencies, and they say, "Well, our method of establishing the guidelines for insurance are one for use at all hospitals, not just the teaching hospitals."

So we would be asking the National Science Foundation please, because of the interests of a Congress, to look into the problem. Really, that is what I am asking. That is a problem for everybody, but this is the only place that I could present the case.

The National Science Foundation has helped in the changing of regulations and other Federal agencies in which I have participated, because they could address the problem.

Fundamentally, that is what I think.

Senator GARN. I understand, and I wanted to point out some of the potential problems that I saw. But on the other hand, I am certainly willing to talk to both NSF and HHS about the issue and get back in touch with you.

Father COLLINS. Please. I would be very appreciative.

Senator GARN. And let you know what they have to say.

Father COLLINS. Thank you, Senator. It would be of great service to the teaching hospitals if there was some way to crack this.

Senator GARN. We will check it out and get back to you.

Father COLLINS. Thank you.

Senator GARN. Thank you, very much.

[The statement follows:]

STATEMENT OF REV. T. BYRON COLLINS, S.J., SPECIAL ASSISTANT TO THE PRESIDENT OF GEORGETOWN UNIVERSITY

Dear Mr. Chairman and members of the committee, I am T. Byron Collins, S.J., special assistant to the president, Georgetown University.

I would like to ask the committee to assist medical school teaching hospitals address a national problem. The problem is the use of new technology patient care equipment.

Under the newly prospective medicare reimbursement legislation, only standard patient diagnostic and treatment equipment may be used. This severely limits the great capabilities of medical school teaching hospitals that have research specialists. There are about 100 such medical school hospitals in the United States.

I would like to give an example of this problem:

There is a machine named nuclear magnetic resonance. This machine can do the work of an X-ray machine without its radiation effects.

If proper procedures were to be established by the National Institutes of Health, the Health Care Financing Administration, and the medical school hospitals, nuclear magnetic resonance could be used with the hospital permitted to charge the costs to patients who use the machine. Under new legislation, advanced technology cannot be used and proper charges made to the patient.

Without the possibility of funding the costs, the introduction of new technology can take several years.

I request this committee to consider providing $1 million of the $2 million cost of the nuclear magnetic resonance machine as a portion of the National Science Foundation scientific equipment program, and designate the use of the nuclear magnetic resonance machine at an appropriate medical school hospital, such as the one on 3800 Reservoir Road NW, Washington, D.C. The machine will be used so as an exemplar for the medical school hospital: patient treatment/advanced technology treatment program, and be eligible for cost reimbursement program. I would be pleased to cooperate on this with the National Science Foundation, the National Institutes of Health, and the Health Care Financing Administration.

An alternative for the committee would be to request the appropriate division of National Science Foundation to spearhead a plan to have National Institutes of Health, Health Care Financing Administration, and Georgetown University Hospital initiate a program that could serve as the exemplar for the medical school teaching hospitals. The nuclear magnetic resonance machine can be appropriately introduced into patient care with a prototype cost reimbursement program.

STATEMENT OF PAULINE H. BROOKS, DIRECTOR OF DEVELOPMENT, CHILDREN"S TELEVISION WORKSHOP

Senator Garn. If we could have Pauline H. Brooks come up to the witness table, please, the director of development, Children's Television Workshop.

Please proceed.

Ms. Brooks. Good afternoon, Mr. Chairman.

I am Pauline Brooks, director of public television development for Children's Television Workshop. I appreciate being here today, and I would like to urge this subcommittee and the Congress to appropriate an adequate level of funds for fiscal 1984 to enable the National Science Foundation to continue its vital support of science education.

Children's Television Workshop has a direct interest in these appropriations since the National Science Foundation, through its public understanding of science programs, has received significant funding for two seasons of 3–2–1 Contact, our award winning education television series that makes science more fun and more understandable to millions of children.

Senator Garn. And adults, too.

Ms. Brooks. Thank you.

With major funding from NSF, the Department of Education and the Corporation for Public Broadcasting, we are now just completed production of a second season of 3–2–1 Contact, which will be aired in the fall by public television stations across the country.

Unfortunately, however, this second season consists of only 40 programs rather than the planned for 65. For 2 years, following the completion of a very successful first season, CTW sought renewal of funding from businesses for a second season with no success at all.

I believe the situation dramatically highlights how essential it is that funding for efforts such as 3–2–1 Contact has to come from NSF. CTW created 3–2–1 Contact because of our firm belief that science education for young children is quite inadequate.

This Nation's industrial leadership depends on science technology, but these fields are not very appealing to young people, and we need to get them interested in these subjects long before they reach college.

As an NSF study pointed out, students who take no more mathematics and science after their 10th year in school have effectively eliminated by the age of 16 the possibility of science or engineering as a career.

Although the level of natural knowledge is a problem, even more basic is the attitudinal problem, the need to get kids turned on to science, and the critical target age range for doing this is 8 to 12.

This is precisely the goal and the target audience of 3–2–1 Contact, which is the one national effort in place that deals successfully with the problem. The 3–2–1 Contact series combines impact in the home with school and with special groups of children.

More than half a million teachers' guides have been requested and distributed to schools. Special projects have been undertaken with science museums, and the Girl Scouts of America has opened up a new merit badge program that specifically uses 3–2–1 Contact as source material.

In Washington alone, over 10,000 merit badges associated with 3–2–1 Contact have been awarded to Girl Scouts.

Quality educational television can be a very effective means of reaching large national audiences at relatively low cost.

For example, with repeat airings, 3–2–1 Contact costs only 1 penny per person per viewing. International developments demonstrate the scope and intensitiy of the challenge this Nation will face from high technology countries for years to come.

The National Science Foundation stands as the only funding source related directly to science, and our own experience is that without a central source, with a specific and dedicated interest, it is difficult to get focus momentum in any area. Without such a source, I believe that nothing significant is going to happen in this vitally important field.

To take advantage of the impetus built by 3–2–1 Contact and its loyal audience, we are now looking to a third season and beyond. But we know that in order to do so, we will have to rely on NSF funding. The science education and the public understanding science program at NSF continues to need and merit your support.

Thank you.

Senator GARN. Thank you, very much.

How much would it cost to complete the remaining 23 programs of the 3–2–1 series?

Ms. BROOKS. About $2 million.

Senator GARN. That would complete your second season and you are talking about an addition?

Ms. BROOKS. Yes. Well, we have actually now just about finished production of the second season of the 40 programs, so what we are looking to now is to do more, preferably another season of 65; if that isn't possible, then another season of 40, certainly.

Senator GARN. Even though you said you had a negative experience of trying to find sources from private sources, are you also going to try to solicit from private sources?

Ms. BROOKS. We will certainly, but it seems to us that we really do have to depend on the sources that are in place from the Government to make such projects possible, specifically NSF, of course, and, hopefully, some help from other agencies. But it has been distressing, the lack of response from the corporate center; it has not been encouraging. We will certainly continue to try.

Senator GARN. Thank you, very much.

We appreciate your testimony today.

[The statement follows:]

STATEMENT OF PAULINE H. BROOKS, DIRECTOR OF DEVELOPMENT, CHILDREN'S TELEVISION WORKSHOP

Thank you for the opportunity to appear before you today. I am here to urge this Subcommittee and the Congress to appropriate an adequate level of funds for fiscal year 1984, to enable the National Science Foundation to continue its vital support of science education.

I want to make clear that CTW has a direct interest in these appropriations, since the National Science Foundation, through its public understanding of science program, has provided significant funds for two seasons of 3-2-1 CONTACT, an educational television series that aims to make science more understandable and appealing to millions of America's 8-to-12 year-olds.

With major funding from the National Science Foundation, the Department of Education, and the Corporation for Public Broadcasting, we are now completing production of a second season of 3-2-1 CONTACT. It will be aired in the fall by public television stations across the country.

For two years after completion of the first season, CTW unsuccessfully sought renewal of corporate funding for a second season. The reduced funding means that we are not able to do a complete series of 65 programs, but only 40. This situation highlights the fact that future funding for efforts such as 3-2-1 CONTACT has to come from NSF and CPB.

America's industrial leadership rests on science and technology, but it is increasingly clear that these fields are not very appealing to America's young people. The problem nationally with scientific literacy, as well as the tiny proportion of students electing to pursue higher education in science, does not occur merely at the high school or college level. The problem starts at the elementary grades, where teachers are least prepared to teach science, and where states are least rigorous in setting standards for science curriculum and for certification of science teachers.

America is losing its edge in science and technology and other countries are rapidly outpacing us in these extremely important areas. Adding to this bleak picture is the plight of our schools. Faced with tighter and tighter budgets, they are compelled to cut their educational programs, and give an even lower priority to science — because it is not considered an educational "basic." Well, science is basic to our lives — and getting more so every day.

America must attract more citizens to science and technology. However, scientists and engineers are not turned out overnight. They must be attracted to those fields at an early age.

As an NSF study points out, "students who take no more mathematics and science after their tenth year in school have effectively eliminated by the age of 16 the possibility of science or engineering as a career."

The National Assessment of Educational Programs reports that only six percent of 9-year-olds listed science as their favorite subject in school. And 27 percent had already decided that a career in science would be too much work and not very satisfying. These are attitudes of children, who for the most part, have yet to experience their first full-time science teacher. It is hardly surprising that the National Assessment finds science knowledge among young people in this country in a long term decline.

To reverse these disturbing trends, it is imperative that the Federal government, along with America's institutions and communications media, undertake a major and sustained effort to rekindle an interest in science and science education.

Although the level of factual knowledge is a problem, even more basic is the attitudinal problem, the need to get kids "turned on" to science — the critical target age range for doing this is eight to twelve. This is the goal and the target audience of 3-2-1 CONTACT, the one national effort in place that deals successfully with the problem for this age range — and television is a most pervasive and powerful educational medium.

3-2-1 CONTACT combines impact in the home, the school and special assemblages of children, such as the Girl Scouts; it reaches children and their families inexpensively. As for school usage, more than 500,000 teacher's guides have been requested and distributed. Cooperative work has been undertaken with science museums, and the Girl Scouts of America has opened up new merit badge programs that specifically use 3-2-1 CONTACT as source material. In Washington, D.C. alone, over 10,000 merit badges associated with 3-2-1 CONTACT have been awarded to Girl Scouts. Through its national distribution, 3-2-1 CONTACT is made universally available to affluent and economically depressed areas alike.

In these days of harsh budget stringencies, it is important to note that quality educational television can be a very effective means of reaching large national audiences at relatively low cost. For example, with repeat airings, 3-2-1 CONTACT costs one penny per person per viewing.

For programs like SESAME STREET, for which funding permits new production year after year, the impact is staggering. Each week more than 10 million different households in this country view an average of two programs. Each year, assuming conseratively that only one person per household watches the show, SESAME STREET receives nearly one billion four hundred million viewings in this country — at a cost of less than one penny per viewing -- and now none of those pennies come directly from federal appropriations.

Let me add a word here about the emerging role of the new technologies such as computers and video discs. These hold promise of adding powerful means of providing education -- which CTW and other organizations are actively exploring. However, the excitment of new technologies should not obscure the fact that it will be a considerable time before access will be available to large numbers of children, especially including disadvantaged.

At least through the 80's television broadcast will remain the technology which can deliver quality education to mass audiences on a cost-effective basis. It works, it is widely available and it is what most children will use to educate themselves. It would be ironic indeed if the promise of the long term future should rob our current generation of children the educational programming they need to learn.

Mr. Chairman, America's industrial leadership clearly rests on its science and technology. Developments on the international front suggest the scope and intensity of the challenge this nation will face from high technology countries for many years to come. The NSF stands as the only funding source related directly to science, and our own experience is that without a central source with a specific and dedicated interest, it is difficult to get focused momentum going in any area. Without such a source, I believe that nothing significant is going to happen in this critically important field.

To take advantage of the momentum build by 3-2-1 CONTACT and its loyal audience, we are now looking to a third season and beyond. But we know in order to do so, we will have to rely on NSF funding.

The NSF's science education and public understanding of science programs merit and need your continued support.

Thank you.

BRIEF RECESS

Senator GARN. Our next witness is not here. We will recess the subcommittee temporarily until the witness arrives.

[A brief recess was taken.]

Senator GARN. As our last witness today, we are happy to have an old friend of mine, Bruce Christensen, president, National Public Television.

Bruce, please proceed.

STATEMENT OF BRUCE CHRISTENSEN, PRESIDENT, NATIONAL PUBLIC TELEVISION

Mr. CHRISTENSEN. Thank you, very much, Senator.

I am pleased to be here this afternoon to testify before your subcommittee.

We would like to address the need for funds for the National Science Foundation in ways that public television stations might work with the National Science Foundation in being a part of the solution for the Nation's difficulties in delivering science and math instruction.

We are certainly aware of your committee's work on precollecting math and science instruction as expressed in last year's committee report and are pleased that the NSF has a plan outlined that deals with the committee's recommendations.

I have a formal statement for the record that I would like to submit, and I will just summarize some of the experiences that I had in Utah as we were trying to deal with the delivery of instructional programing to people in the State.

I managed the radio and television stations in the State of Utah for 15 years. During that period of time, we worked very hard to build the delivery broadcast capacity of the stations to see that a broadcast signal was available to every citizen in the State.

We were able to reach almost every corner of the State, and 99 percent of the population was able, then, to get a broadcasting signal.

The importance of this particular effort was that not necessarily the delivery of public television's general audience programs, but, specifically, the delivery of its instructional services. KUED broadcasts 6 hours a day of inschool programing through elementary and secondary schools, and this allows teachers to use programs in the outlying areas that they otherwise wouldn't have available to them.

The teachers can take the programs; there is a program guide that comes and is delivered through the State education system to the teachers. They are able, then, to plan their curriculum; discuss the program that is going to be watched; watch it, and then follow up with some interaction with the students in the classroom.

We think this has been very useful in some of the science instruction that has gone on in the State, and, yet, more really needs to be done in this particular area.

In the last 3 years, there has been some special emphasis based on linking the State colleges together in a two-way microwave video link that would tie the University of Utah, Utah State, Webber, and SUSU together.

The three major colleges have been tied together for about 18 months and they will add the link to Cedar City this coming fall. There are plans to tie the facilities at St. George, Price, Ephraim, and Vernal with the trade technical schools in Provo and Salt Lake so that we can get a complete tie of all of the systems at colleges and technical schools.

This system is now being used between Webber, Utah State, and the University of Utah for students to go into classrooms and take instructions from professors on other campuses. It allows for two-way interaction and is quite useful.

We have now in the State pretty well completed the hardware portion of what we need to do. What is missing is the software portion. What is needed are the dollars that would allow the production of high quality instructional materials, particularly for science and math, for use in high school preparation classes.

Many of the high schools in the outlying areas don't have the kind of programs that would allow them to bring in top quality science and math instructors, but could use effectively high quality television programs to fill that need.

So we would recommend a $15 million NSF education fundamental location to develop and produce new science and math programs in schools and colleges. This would be, first, an effectively cost-effective way to resolve and work toward the solution of a national priority; second, it would train both teachers and students. Not only does it provide instruction for the students in the classroom, but it could be a way of bringing teachers up to speed in retraining them in current math and science skills.

Finally, it would be an equitable way to reach those who were geographically isolated in school systems throughout the country, and that happens very often in the West as you certainly know, Senator.

We also would recommend reinvigorating the public understanding of science programs in NSF. Right now; NOVA and 3-2-1 Contact are the only weekly television science programs that are on television, and that is simply not enough to do the job if, in fact, we are trying to get this particular priority of dealing with science and math education taken care of.

The Nation needs more programs to make science understandable and useful in their daily lives. So we would recommend a $10 million public understanding of science program budget to produce television programs for the general audience that would address this particular need.

Our public television stations stand ready to do their part. What is missing in the partnership is really the funding to take care of the programs that could do the job for us, and we would hope that those minimum resources could be allocated to the National Science Foundation for this purpose.

I am certainly pleased to be here, Senator, and am happy to answer any questions.

Senator GARN. As you know, I support the use of television as a mathematical and science educational tool. It really reaches a tremendously large audience at a relatively small cost per viewer. So television has a lot of inherent advantages.

My question would be, I suppose, to put it very bluntly, you don't trust NSF to allocate it; that is why you want to earmark it?

Mr. CHRISTENSEN. I guess that is where we come to. We are concerned that in looking at the resources and how they will be spent, that this particular area will be overlooked in their priorities.

I don't know that it is as much a matter of trust as it is enormous pressure on where the money will be spent, and we would hope that television, which is a nontraditional way to teach, would be considered in the way that NSF spends that money.

Senator GARN. The problem comes in a general sense with earmarking now. As I watch the budget process become more and more difficult every year and the large deficits and so on, we find more and more requests, not just in this area, but all areas, to earmark.

In other words, people are saying—again, trust was not the right word—but, "We don't believe they will allocate it the way we want."

So it becomes, in a way, a dangerous precedent if you start dividing up and taking away all the flexibility. Everybody more and more starts to say, "Well, look, we want ours earmarked." In almost all cases, it can be justified from the standpoint of the individual program, but, again, I think you can see what I am driving at.

Mr. CHRISTENSEN. Oh, sure, I can. You bet, you bet.

Senator GARN. That if we have budgets marked up with $25 million earmarked and this is only $3 million, the complexities of the budget and the lack of flexibility grow and grow.

The budget process, as you have been reading, becomes more and more difficult all the time.

Mr. CHRISTENSEN. Is there a way for Congress to express concern and desire to have a program pursued? In our case, again, the concern is that if it is not at least encouraged in some way, that the public television stations will be bypassed as a means of getting quickly some way to address the science and math dilema that we find outselves in.

Senator GARN. Obviously, we can always express our concern, our opinions, in report language, all sorts of things; sometimes it is effective; sometimes it is not.

I have made a number of suggestions on various programs the last couple of years, and sometimes they have been interested in what I had to say, and other times, I have been totally ignored. So it depends entirely on, I suppose, whether they agree with you or not or whether they feel that if they don't, you will put it in legislative language to force them to do it.

Again, with earmarking I can always find projects, that I say, "Sure, let's earmark it," and totally justify that on an individual basis. But earmarking as a principle troubles me.

Mr. CHRISTENSEN. I understand exactly your concern. I don't have any better solution in this case than to hope the committee would see the kind of dilemma we are in where if there isn't a strong statement about the use of nontraditional means of delivering science and math education, that it is likely to be bypassed as it is considered for distribution once the money is appropriated.

Senator GARN. I thank you, very much, for your coming and for your willingness to testify.

This is a rare occurrence. A Senate committee is truly ahead of time. It is remarkable. I don't know whether we should hold a party, a celebration or what. [Laughter.]

Usually they grind on and on hour after hour. The witnesses have been concise and to the point today, which has been very refreshing.

Thank you, very much.

Mr. CHRISTENSEN. Thank you, very much, for letting me come. I appreciate it.

[The statement follows:]

STATEMENT OF BRUCE CHRISTENSEN, PRESIDENT, NATIONAL PUBLIC TELEVISION, ON BEHALF OF THE NATIONAL ASSOCIATION OF PUBLIC TELEVISION STATIONS

The program production and distribution capabilities of this nation's educational television system offer a unique resource to combat the illiteracy of the 1980's in science, math and technology on a wide scale and in a cost-effective manner. We recommend that the Subcommittee consider our proven ability to reach vast numbers of the American people viewing television in their homes as well as our experience in targeting specific pockets of student and teacher needs from the elementary through the graduate level. Specifically we encourage the Subcommittee to appropriate funds for a reinvigorated Public Understanding of Science Program (PUOS) as well as NSF matching grants to encourage the production of instructional television material to facilitate the objectives of emergency science and mathematics legislation which has passed the House and is pending in the Senate.

This country requires a growing pool of skilled educators, as well as students, becoming interested in and excelling in science and mathematics. But, just the reverse is occurring. Unfortunately, science and math teachers increasingly are leaving the field for more lucrative positions with industry. There has been a dramatic decline in the number of new science and math teachers trained annually by our colleges and universities. Both student enrollment in high school science and math courses and student achievement levels in these fields are declining. Only half of our high schools are able to offer science and math courses beyond the tenth grade. And, according to the 1982 report of the National Science Teachers Association, only half of the newly hired science and math teachers are qualified to teach these subjects.

We are attempting to answer to these concerns.

In public television, over 220 of our stations today provide instructional programming for elementary and secondary classrooms or credit courses for colleges and universities. Over 15 million school children are regular users of the instructional television programming; the yearly cost per pupil--paid with state and local funds--is substantially less than the price of a single textbook. Over 55,000 students at more than 550 colleges and universities enrolled in the first year of the PBS Adult Learning Service, which distributes college credit courses to public television stations nationwide. Those institutions of higher education participating in the adult program receive full tuition payments from students but their cost of providing the courses is quite low, in the range of $20 to $40 per enrollee. These courses have proved popular with students due to the quality and convenience of offerings made through stations and cooperating institutions of higher learning. This pattern of local station-college collaboration has now proven its cost-effectiveness in providing undergraduate, graduate and in-service courses. For example, 65% of the engineering graduate degrees in South Carolina are conferred to television students and about 6,000 have benefited from Kentucky's inservice Master's Degree telecourse program.

Central to the effective design and acceptance of these courses is the experience of public television, on a limited budget, in producing programs in collaboration with outstanding teachers. These programs are increasingly successful in combining sound instructional design with program formats that capture and sustain the interest of students. They also enable the presentation of concepts and dynamic processes difficult to illustrate on a blackboard or in a two-dimensional textbook diagram. Using animation, television can show a synapse firing in the brain, or can present an experiment beyond the reach of students in any but the most sophisticated laboratory settings. In such ways, scientific process and method can be revealed in an accurate and stimulating manner, encouraging further engagement and investigation.

Such visual presentations can prove particularly useful when connected with classroom activities available to students following viewing. Accordingly, a number of our stations are experimenting with ways to integrate television viewing and use of computer software into more traditional patterns of instruction.

New video technologies also show promise as educational tools.

Two of our stations are experimenting with the educational uses of teletext. Teachers involved in the experiments report that the interactive aspect of the keyboard/television screen material has a strong motivational effect on their students, particularly when used intensively. They have witnessed dramatic turn-arounds in the attitudes and achievements of kids who previously had little interest in learning or had not responded to traditional teaching methods. Two other stations are pilot testing interactive cable and videodisc technologies for college level courses. One of these courses is "The Physics of Structure," a college physics course which features individually-tailored instruction.

Although existing programs have been well received and widely used, and the experiments with use of new technologies encouraging, the ability to pursue these efforts on a major scale has been extremely limited. Of the over 150 series distributed by the Agency for Instructional Television (AIT), for example, only 18 are science oriented and only six concern math skills. Moreover, most of this programming is limited to once a week series of 15 or 20 minutes each and targeted at the elementary level. Only a few courses have been designed for learners at the junior high level and there are virtually no courses to meet the needs of high school math and science teachers and their students.

High quality, educationally-sound computer software is extremely scarce, and the cost of developing materials that combine the best attributes of the television screen, print, and computer software is well beyond the reach of even the largest school districts.

This situation is as unfortunate as it is unnecessary. The program production and distribution capabilities of this nation's educational television system offer a unique resource for the improvement of elementary and secondary science and mathematics education on a wide scale and in a cost-effective manner. Because our system reaches about 95% of the U.S. population, it is especially well-suited to reaching vast numbers of people as well as targeting specific pockets of students. The system can, and does, provide college-level coursework to people without easy access to campuses, due to employment schedules, domestic demands or both. We propose that you use this system to create new learning tools for students, teachers and administrators of our nation's educational system as well as new and innovative learning tools for the American public-at-large in the form of original, regularly-scheduled science programming.

First, we propose that you appropriate $15 million for a matching grant program to be established at NSF for the effective use of instructional television materials. This matching fund could be used to foster state and/or local investments in the production of math and science television programming and related learning tools. This limited amount of targeted funding is essential to our ability to provide new services at a time when federal support for existing public television services has been reduced by $60 million.

Experts in these fields should identify the subject options and priorities for addressing them, just as they have done for the science and math instructional programs our stations have produced in the past. The possibilities include both specific and general courses: high-level college preparatory material such as calculus, trigonometry, statistics, matrices, physics, organic and inorganic chemistry as well as general courses necessary to enhance scientific, math and technological literacy among a large segment of our non-scientist population.

Each telecourse could be designed to meet one specific target or to meet multiple requirements, such as 1) in-service instruction (college credit) for emergency qualified science and math teachers; 2) material readily adaptable to the instructional needs of the teacher once he or she returns to the classroom, including video, computer, and print-based materials; and 3) in-service segments for qualified teachers to update skills and knowledge. Special segments for guidance counselors could prepare them to encourage their students toward math and science courses rather than seemingly less challenging subjects which appear to promise a higher grade. All of these materials could be adapted for a variety of distribution systems--broadcast, ITFS, cable, videodisc and computer-assisted instruction--to ensure widest possible availability and use.

Preference for the federal matching grants should be given to producers of instructional television programming with a proven track record--those who have demonstrated their ability to produce high quality material that educators have used and evaluated favorably at the K-12 and/or post secondary level. Preference also should be given to proposals involving collaboration across state lines. These, by definition, guarantee interstate distribution and use, and would encourage state and local educational authorities to consider proposals that respond both to local needs as well as to the needs of similar states. Multi-state proposals also reassure educational authorities that investments being made beyond their borders are helping them meet their local science and math needs.

It is important to note that the existence of such a matching grant program would not limit state or local use of the funds, but would encourage governmental and educational leaders to work with proven producers to provide material of highest quality and proven applicability.

Second, we need to revitalize the Public Understanding of Science Programs at the National Science Foundation. The value of public television programming is, of course, not limited to instructional material for classroom use alone. Programs such as The Ascent of Man, Cosmos, NOVA, Nature, Life on Earth, and The Body in Question have made our public television system a pre-eminent home source of quality science information, and the only regular source of such information for all on a nationwide television scale. And 3-2-1 Contact is the only science series for our young people, 23 million of whom watched it during its first broadcast run alone. Local funds pay for the broadcast of these programs, but without the Public Understanding of Science Program at NSF, none of the science programs that have become household names might ever have appeared. There would be no NOVA nor a 3-2-1 Contact. And WNET would not be in the final stages of production on The Brain, a new series of eight programs produced in consortium with Japanese and French television, that span the range of worldwide research on the structure and functions of the brain.

The elimination of funds for the Public Understanding of Science Program has seriously eroded public television's ability to produce more of this programming. Despite the overwhelming success of 3-2-1 Contact, the Children's Television Workshop could not find a single corporate underwriter for an additional series; our stations will repeat the original 13-week series for the seventh time next year. What our young people really need is a full 36-week series, which teachers could use throughout the school year. With a new Public Understanding of Science Program, this $5.5 million proposal could go forward.

In addition, NOVA is the only weekly prime-time science-oriented series on television today, and is seen by as many as 20 million persons per broadcast. But there is no weekly science magazine to keep the general population up-to-date on scientific and technological developments as Wall Street Week does for stock market trends. Only two short local series--Tomorrow/Today and WNET's local program Innovation--have been produced. Instead, public television should be providing a full 52-week series (26 original programs and 26 repeats) with nationwide applicability and a permanent place on the PBS schedule for all interested Americans. Such a program would carry a price tag of about $2 million a year. And, like NOVA, it is unlikely to happen at all without a strong commitment, over a number of years, from the NSF.

Finally, it would be helpful for our stations and independent producers to be able to seek funding for topical science specials, such as "Spaces," a short new series which encourages young people, especially minorities, to consider a career in science and the proposed two-hour program entitled "A Quarter Century in Space," designed to examine the U.S. commitment to space on the 25th Anniversary of NASA. With at least a $10 million media set-aside for a new Public Understanding of Science Program we could meet these three objectives--a daily program for our young people throughout the school year, a weekly program to encourage scientific literacy at all ages and an occasional science special.

Here, too, some limitations should be established to ensure the widest possible use of such programming. Preference should be given to proposals which are designed for instructional use as well as home viewing and which include ancillary material and unlimited broadcast and audio-visual rights for use in schools and other educational institutions such as libraries and museums.

Recommendations

Thus, we recommend that the Subcommittee appropriate $15 million for a federal matching grant program at NSF, which would require stations to raise dollars from private, state, or local sources, for innovative educational training programs for teachers, students and school administrators in math and science.

In addition, we recommend an appropriation of at least $10 million for media for a new NSF "Public Understanding of Science Program" to provide media for a daily science program for young people, a weekly magazine series to promote science literacy and prime-time science-oriented specials. These appropriations could be made within the present NSF authority or part of whatever new authority is approved by the Congress.

With these two steps, the Subcommittee would be making a major effort in combatting the illiteracy of the 80's--in science math, and technology--toward preparing our young people for a future filled with productivity and technological advancement.

ADDITIONAL PREPARED STATEMENTS

[CLERK'S NOTE: The following additional statements are provided for inclusion in the record:]

STATEMENT OF DAVID BRETZKE, PRESIDENT, RURAL WATER ASSOCIATION OF UTAH

In 1937 the Congress passed the Water Facilities Act to provide assistance to create and build rural water systems throughout the country. This commitment was the next logical step after the success of the efforts to provide electricity and telephone service throughout rural America. Over the next forty-five years over $9.8 billion were provided in grants and loans with over 75% of that assistance coming after 1974. The impact has been dramatic as the flow of people from rural areas to our large cities has been reversed and rural America again has a growing population. Rural drinking water has been the backbone of this new growth.

With this enormous investment in our rural communities EPA has the responsibility to protect the quality of the water rural water systems produce. This became a special problem because of the diversity of rural water development. There has been no specific pattern to construction and operation of these small systems. Some areas built many small systems while others worked to consolidate small systems into regional water supplies. Operation and maintenance was often neglected with the primary responsibility being to make that monthly payment to FmHA.

When the Safe Drinking Water Act was passed these systems faced the issue of Federally mandated drinking water standards for the first time. In many areas where any water system became a vast improvement from the former water supply, the issue of rigid water quality standards was overlooked. Many Congressmen living on rural water systems were aware of the provincial and protective attitudes of local water users. They sensed a potential conflict between those systems and the EPA's new enforcement efforts. As a result they responded to an NRWA suggestion to create a program to enlist the small water systems to help EPA enforce the law. If you ask rural folks you get help, if you tell rural folks what they have to do, you get suspicion. Congress told EPA to ask first by working with NRWA.

As a result of that decision the Congress, the Environmental Protection Agency and rural water systems have worked together to protect and improve the quality of drinking water in the United States through the implementation of the Safe Drinking Water Act. Of all the major environmental protection efforts over the past decade this program has had the greatest cooperation from those persons and organizations most affected by the law. When the Safe Drinking Water Act was passed it was pointed out that one of the major problems would be to assure that small water systems which serve only 20% of the population, but comprise 80% of the systems, be brought into compliance.

After eight years of activity under the Safe Drinking Water Act, there remain significant problems to be resolved. A sample of these include:

- Congress in passing the Safe Drinking Water Act and EPA in administering it have determined that the great majority of the water systems out of compliance with the safe drinking water standards are smaller rural water systems. EPA's most recent emphasis has been on compliance among the small rural water systems with significant statistically supported success.

- 53,000 of the 65,000 community water systems in the United States serve populations of under 2,500 persons. There are over 150,000 non-community water systems throughout the country. Many of these systems are consolidating and improving their systems and their operation and maintenance in order to meet SDWA standards.

- EPA projects that at least 13,600 public water systems, mostly in rural areas, cannot meet minimum Safe Drinking Water Act standards due to serious financial and operating problems and the resolution of these problems continues to be a top EPA priority.
- In FY 1981 over 146,000 violations were logged against 28,000 of the 65,000 community water system. Public notification was given in only 16,000 of these cases. In 1982 these numbers were reduced by approximately 10% and are improving yearly.

The General Accounting Office identified the basic reasons for these statistics as: "the lack of full-time and properly trained operators, operator apathy towards Federal testing requirements, and insufficient resources -- both funding and personnel -- to meet the Federal testing requirements."

The National Rural Water Association with a current membership of 33 state rural water associations, has oriented its expanded program to solve these problems through rural water operator training workshops and on-site technical assistance visits. Each state association conducts a minimum of 12 operator training workshops per year while the state association trainer spends ten days per month giving on-site technical assistance to rural water systems. In state after state this program is closing the gap between the problems faced by small systems and the solutions available through better management, water services and increased state and local funding assistance. Small systems don't simply receive notice from the states or EPA that they are out of compliance - they receive immediate on-site assistance and follow-up through the EPA-NRWA program.

In the twelve months from January 1, 1982 through December, 1982 state associations conducted 381 workshops and provided training for 12,592 rural water operators representing 5,117 systems. With the constant turnover of small system operators the majority of these persons had never attended sessions designed to assist them in improving the operation of those systems. A total of 8,440 on-site technical assistance visits, including 2,478 for compliance with the Safe Drinking Water Act, were also carried out which were normally the only hands-on assistance provided to these systems to help them meet the requirements of the Safe Drinking Water Act. The workshops were critical in preventing numerous systems from falling under non-compliance with the Safe Drinking Water Act.

Each state association is directed by a board of directors comprised of small system water operators or board members of rural water systems. Board members donate their time and skills to the association programs. This has promoted a sense of volunteerism on the part of all rural water associations within a state toward meeting Safe Drinking Water Act standards. It is a frequent occurrence for systems to share materials and technical expertise with each other. This has greatly expanded the impact of the National Rural Water Association without a corresponding increase in funding.

The state rural water associations of the National Rural Water Association work in close cooperation with the Environmental Protection Agency and state health departments. They also encourage state legislatures to commit state funds to solve drinking water problems.

They are, however, preeminently an association of rural water people who have banded together to solve their own problems with regard to Safe Drinking Water Act compliance. Through the EPA funded training and technical assistance program the Congress has encouraged those systems most affected by Federal drinking water regulations to become the strongest advocates for their enforcement and compliance. It has eliminated state and Federal bureaucracies and has reduced anti-EPA attitudes of rural systems to a minimum.

While a number of state rural water associations have expanded their programs through state funding and increased contributions from the small systems the program needs to have continued EPA assistance to be effective throughout the country. The level of EPA funding for each state has never increased while the cost of the program attributable to inflation has been picked up at the state and local levels. When the Congress views the vast number of persons, governments and industries who are covered by numerous environmental laws there is no other instance when EPA has reached out to such a large group as the rural water systems and found the willingness to work at the grassroots level to meet Federal requirements. This program has made drinking water enforcement in rural areas a special commitment. There is much more to do. We urge this Committee to provide the funding to continue the program in FY 84.

STATEMENT OF JOE JOHNSON, PRESIDENT, ASSOCIATION OF METROPOLITAN SEWERAGE AGENCIES

Dear Mr. Chairman:

I request that this statement be entered into the record as the Association of Metropolitan Sewerage Agencies" formal position on FY 84 funding of the Construction Grants program. On behalf of the Association of Metropolitan Sewerage Agencies, I am writing to request that the Committee on Appropriations', Subcommittee on HUD-Independent Agencies act without delay and report $2.6 Billion in FY 84 funding to the Construction Grants program under the Clean Water Act for sewerage treatment facilities.

AMSA represents 93 of the nation's largest sewerage agencies that serve a population in excess of 70 million. These agencies' budget activities have been subject to revision continually, because of unexpected budget authorization reductions in this program under the 1981 Clean Water Act amendments. These reductions have subsequently heightened the need for the provision of the maximum amount of funding permitted.

Many communities face the real possibility of being found in non-compliance with the mandates of the Clean Water Act should they be faced with a further erosion of support vis a vis the Federal share toward construction costs of these sewerage treatment plants. For this and other reasons, we urge affirmation action and expeditious passage of this program's funding for FY 84.

In December 1981, Congress and the President reached a bipartisan agreement to authorize $2.4 billion annually for the Environmental Protection Agency's Construction Grants program through FY 85. The Reagan Administration in January requested $2.4 billion in FY 84 program funding. We urge the Committee to increase this level by $200 million. As part of the 1981 amendments, Congress found combined sewer overflows to marine bays and estuaries serious enough to warrant a special $200 million authorization to provide communities, afflicted with these kinds of problems, the ability to correct this environmental threat. The Administration request fails to provide funding for this activity in FY 84. AMSA urges the Committee to redress this circumstance and make funds available for this activity.

Several critical factors argue for an FY 84 program level of $2.6 billion: (1) EPA has estimated more than 100,000 jobs hang in the balance; (2) hundreds of wastewater treatment projects vital to the goals of the Clean Water Act are ready to go to construction; and (3) expeditious funding will mean expedited construction and completion minimizing costly delays that add to final project costs.

A strong signal of Federal commitment to the Nation's effort to enhance water quality is vital. To this end, I again urge your Subcommittee to look favorably upon a full appropriation of $2.6 billion in FY 84.

STATEMENT OF JONATHAN LASH, STAFF ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL, INC.

These comments are submitted on behalf of the Natural Resources Defense Council. NRDC is a private, nonprofit, public interest organization committed to the conservation and wise use of our nation's natural resources. NRDC has focused upon the programs administered by the Environmental Protection Agency since the Agency's creation. We are deeply concerned that two years of budget cuts, mismanagement, and policy changes have done debilitating damage to the agency charged with primary responsibility for protecting the environment and health of Americans.

A recent New York Times-CBS News poll published on Sunday, April 17, 1983, asked "Do you agree or disagree with the following statement: Protecting the environment is so important that requirements and standards cannot be too high, and continuing environmental improvements must be made regardless of cost." In September 1981, a surprising 45 percent of the public agreed with that statement, rejecting all notions of balancing costs against benefits. By April 1983, 58 percent of the American public agreed with that statement. There could be no clearer demonstration of the views of the public on the environmental policies of this Administration. They don't want budget cuts, weakened standards, and lax enforcement. They want action. Other polls have shown that over 90 percent of the public supports strong action on clean air and clean water. Fewer than 10 percent support any kind of retreat on pollution control.

Yet retreat is what there has been -- retreat on enforcement of the law; retreat on research on environmental hazards; retreat on regulation of air pollution, water pollution; retreat on the cleanup of hazardous wastes; retreat on the regulation of dangerous pesticides.

For two years the Administration has assured the Congress that budget cuts at EPA would have no effect on the Agency's ability to carry out its programmatic responsibilities. Those assurances have proven false. The Agency has been hobbled, not only by malfeasance and inept administration, but by a drastic lack of resources.

Whether one looks at permitting, rulemaking, research, enforcement, or support for the states, EPA's performance during the past two years has been poor and the available resources inadequate. The recently completed review of the EPA budget by the Congressional Budget Office makes it absolutely clear that there is a mismatch between EPA program responsibilities and the available resources to carry them out.

We have examined each regulatory agenda published by EPA from January 1981 through October 1982. We looked at all actions reported under the air, water, drinking water, toxic substances, and waste laws to determine which had been completed and which were on schedule. Of 256 actions that we identified, 138 are behind schedule, 96 of them nine months or more. Fifty have been cancelled or indefinitely postponed. Four have simply disappeared or no longer even carry a completion date. Twenty-four, mostly relaxations of existing rules, have been completed. And four are uncompleted but on schedule.

EPA has failed to renew tens of thousands of expired NPDES permits.

In 1977, Congress required the EPA to establish new source performance standards for a variety of industries under the Clean Air Act. When Mrs. Burford took office, 37 standards had been adopted, 12 had been proposed, and 49 were in preparation. Since then, despite repeated promises that the standards would be promulgated promptly, EPA has adopted only seven new standards.

Progress has virtually halted in the regulation of toxic air pollutants.

Congress has required EPA to examine safety data for all pesticides registered before full safety testing was required. Thousands of pesticides presently in use are involved. EPA has made virtually no progress. For 600 basic active ingredients in commercially available pesticides, at least 62 percent have been inadequately tested to determine whether they cause cancer; 60-70 percent have not been adequately tested to determine whether they cause birth defects; and over 90 percent have not been tested to determine whether they cause genetic mutations. But, far from attempting to rectify this national scandal, EPA has reduced its pesticides staff by 29 percent.

Inspection, monitoring, and enforcement activities have fallen off sharply, and enforcement officials throughout the Agency report frustration at the lack of resources available to them to pursue illegal polluters.

Substantial public attention has focused on the failure to enforce the hazardous waste laws effectively. According to EPA and Justice Department figures, there was a 79 percent decline in the number of hazardous waste case referrals to EPA headquarters from the regions between 1980 and 1981 and a 69 percent decline in the number of cases referred from EPA headquarters to the Justice Department. During the first year after Mrs. Burford was confirmed, so far as we can tell from EPA documents, not a single federal action based on RCRA was filed by the Department of Justice, although EPA officials justified the decline in the number of prosecutions on the grounds that they would increasingly rely upon more efficient and less expensive administrative actions. Between January 1981 and the end of Fiscal Year 1982, EPA issued only two orders under Section 106(a) of the Superfund law to abate imminent hazards, and only three orders under Sectin 301(3) of RCRA for the testing of hazardous waste sites, and only five under Section 7003 of RCRA to abate imminent hazards. While case referrals have increased in recent months, the increase is tiny compared to the job remaining to be done.

Hazardous waste enforcement activities did not decline by coincidence. The resources allocated to hazardous waste enforcement have declined. Congress appropriated $151 million for the overall hazardous waste program in FY 1981. The Administration requested $103 million in FY 1983; Congress appropriated slightly more, $116 million. This year the Administration proposes another cut to $110 million. The Administration has justified the cuts on the grounds that portions of the program have been transferred elsewhere or to the states.

Examination of the budget, however, casts doubt on the transfer theory. For example, in FY 1981, the Agency spent $11.3 million for hazardous waste enforcement. The FY 1983 request was $1.9 million. The budget document explains that portions of the program were transferred to the Office of Legal and Enforcement Counsel, the Regulatory Strategies Implementation Program, and the states. Yet this diaspora of enforcement resources has not resulted in corresponding increases in funding of the recipient programs. For FY 1983, the Administration proposed heavy cuts in both the regulatory strategies program and in state hazardous waste grants. The Office of Legal and Enforcement Counsel did not receive increases corresponding to the cuts elsewhere, and only Congressional intervention prevented actual cuts.

In fact, the Administration proposed cuts in total enforcement-related staff for all programs from 2,108 to 1,635 full-time equivalents. In FY 1984, according to the testimony of Mrs. Burford on February 15, 1983, the reduction would be to 1,500 full-time equivalents.

These cuts in permitting and enforcement have taken place at the same time that the Agency is trying to implement and enforce permitting and monitoring requirements and crack down on midnight dumpers.

We hope and believe that William Ruckelshaus will make a new beginning at EPA, but he cannot do so without adequate resources. It would be a sad irony to shackle Mr. Ruckelshaus to the misguided policies of his predecessor -- the massive cuts that did so much to throw the EPA into disarray.

We urge the Committee to take as a starting point the Fiscal Year 1981 EPA budget. That level, $1.35 billion for operating programs, shrunken by inflation and inadequate to meet the growing demands upon the Agency, is still a reasonable interim step for an Agency that must be restored to effectiveness if the health of Americans is to be protected. The increases should focus first of all upon research; enforcement; regulatory action to protect Americans from exposure to toxic substances through pesticides, hazardous wastes, consumer products, air and water pollution; and support for state pollution control programs. The following are examples of programs that should be funded or restored to previous levels of funding. The list is by no means comprehensive; it simply represents a sample of the kinds of activities that must be supported at EPA.

Clean Air Act

The following research should be fully funded under section 103 of the Clean Air Act:

1. Full-scale field demonstration of new SO_2 and NOx control technologies, e.g., limestone injection (LIMB).

2. Large-scale epidemiological studies to test Lave & Seskin, Mendelsohn & Orcutt, et al., statistical studies that

suggest sulfates may be responsible for as many as 50,000 premature deaths per year.

3. Compile a detailed inventory of materials susceptible to damage from SO_2 and acid deposition.

4. Conduct higher species animal research to follow up on studies showing mice and rats suffer higher death rates from influenza virus after exposure to NOx and ozone.

Under section 110 of the Clean Air Act, EPA should be given sufficient resources to comply with section 110(c), whic requires EPA to adopt federal pollution control regulations for the over 100 areas that do not have adequate plans to meet clean air standards. Under section 111 of the Clean Air Act, EPA is required to adopt New Source Performance Standards for 72 industrial categories. At the end of 1982, 61 categories remained to be regulated. EPA should be given sufficient funds to complete all remaining NSPS by the end of Fiscal Year 1984.

Under section 112 of the Clean Air Act, EPA has approximately 40 substances under study for possible regulation as hazardous air pollutants. The long delays in completion of regulatory action on these substances caused by budget cuts at EPA are causing significant health hazards for the American public. The air program should be given sufficient resources to complete assessments of ten pollutants per year and to propose regulations within six months of a positive finding of a need for regulation (multiple industrial category regulations will be needed for some pollutants, e.g., benzene, so the regulatory workload could be 10-20 regulations per year even if not all of the 40 pollutants are eventually determined to require regulatory action.)

Under section 113 of the Clean Air Act, EPA is required to take enforcement actions against stationary sources using more than a hundred tons per year of pollutants. EPA has however limited its enforcement actions to sources larger than 250 tons per year and located in "non-attainment" areas. The Office of Legal and Enforcement Counsel and the air program should be provided with sufficient resources to enforce §113 as written. In addition, section 114 requires inspection and monitoring. However, resources for this purpose have been so reduced that, on the average, sources are subject to one federal inspection every ten years. Air program resources and state grants should be increased enough to assure that each source is inspected at least once each year by either state or federal authorities.

Section 122 of the Clean Air Act requires EPA to review and, if appropriate, regulate four named pollutants. However, EPA has failed to complete work on any of the four. The air program should be given sufficient resources to complete that work by the end of Fiscal Year 1984.

Safe Drinking Water Act

Over one year ago, EPA published an Advance Notice of Proposed Rulemaking listing 14 chemicals for which it proposed to promulgate maximum contaminant levels for groundwater. However, EPA has failed to complete action on any of the 14. Sufficient funds should be provided in the FY 1984 budget to assure completion of the promulgation process by the end of calendar 1983. In addition, sufficient funds should be provided to enable EPA by March 15, 1984, to establish a list of toxic substances found in surface or ground water that are candidates for maximum contaminant levels in addition to the 14 listed in the ANPR and those contaminants that are candidates for treatment techniques under Section 1412 of the Safe Drinking Water Act.

Toxic Substances Control Act

The Fiscal Year 1984 budget should include sufficient resources for the Office of Toxic Substances to complete the following tasks:

1. Develop a list of toxic chemicals that are candidates

for regulation under section 6 of TOSCA and a timetable for completing unreasonable risk assessments.

2. Establish a program for tracking new chemicals in commerce that were placed on the section 8(b) inventory, although little or no toxicity data were submitted by the manufacturers in premanufacture notices.

3. Develop a list of toxic chemicals that may or do present an unreasonable risk pursuant to section 5(b)(4)(A)(i).

4. Develop a schedule for proposing significant new use rules for chemicals listed under section 5(b)(4)(A)(i), as required by section 5(b)(4)(B).

Pesticides

Section 3(g) of the Federal Insecticide, Fungicide, and Rodenticide Act requires that pesticides registered prior to 1972 when stringent health standards were adopted must be re-registered in order to consider health and safety data. Several hundred active ingredients are involved. The EPA Office of Pesticides should receive sufficient resources to reevaluate all pesticides registered prior to 1972 and establish a priority list of active ingredients for which the reevaluation will proceed immediately.

In addition, the Office of Pesticides must receive adequate resources to audit all health and safety studies submitted by industry in connection with new pesticide registration requests. Over the past two years, EPA has been able to audit only a tiny fraction of health and safety studies submitted to it.

Over 200 pesticides are registered in whole or in part on the basis of safety data supplied by Industrial Biotest Laboratories (IBT). Principal executives of IBT are now standing trial in Chicago for providing false and fabricated data to EPA. Nonetheless, pesticides registered with IBT data continue to be marketed throughout the United States. While EPA is and has been trying to obtain parallel or replacement studies, the project is seriously behind and has been hindered by lack of resources. The Office of Pesticides should receive sufficient resources to screen all pesticides registerd with IBT data and identify those for which no replacement studies have been submitted and to initiate proceedings to suspend such pesticides when substitute studies are not immediately made available. The Office of Pesticides should be given resources to recommence publication of the Pesticide Monitoring Journal and Pesticide Abstracts.

Freedom of Information

During the past several years, EPA has been extremely slow in responding to public requests for information under the Freedom of Information Act. Responses that are required within ten days often take more than a year. EPA officials have argued that the delays are a consequence of budget cuts. If that is so, the budget should be increased sufficiently to guarantee the public access to information as provided by law.

We urge the Committee to assert leadership in this matter. Congress shaped and enacted the programs that are being undermined at EPA; Congress should establish clear instructions to the Agency through the budget that those programs are to be vigorously, effectively, and fully implemented. Mr. Ruckelshaus may be able to reverse the Administration's EPA policy, but the Congress should not wait and see; it should seize the initiative and assure fulfillment of the environmental goals so strongly supported by the American public.

Thank you, Mr. Chairman, for this opportunity to testify. I will be very pleased to answer any questions.

STATEMENT OF CHARLES H. JONES, PRESIDENT, WATER POLLUTION CONTROL FEDERATION

Dear Senator Garn:

This letter comments on the U.S. Environmental Protection Agency's FY '84 budget proposal. The Water Pollution Control Federation (WPCF) has restricted its review to clean water programs controlled by the agency. The Federation offers its comments for your committee's hearing record on the Administration's request. WPCF is a nonprofit educational and technical association of 30,000 members drawn from all fields within the clean water profession.

General Reactions to the Proposed FY '84 Clean Water Budget

Overall, the Federation finds the FY '84 proposal unsatisfactory. The funding levels requested for agency operations, training, research and development, and state assistance will not maintain the levels of activity necessary to continue the nation's clean water programs at a reasonable pace. Only the proposal to continue funding the municipal construction grants program at $2.4 billion reflects the importance of clean water. WPCF therefore recommends that Congress consider appropriating for FY '84 no less than the budget approved for FY '83.

A comparison of the FY '84 request with the appropriations of FY '83 and preceeding years shows that the trend to cut back on federal funds for all major categories of water pollution control (excluding construction grants) would continue. Water programs in general would be reduced 33% from FY '83 levels. State assistance would be cut 28%; R&D diminished by 23%, down for the third consecutive year. Even these percentages understate the full effect of the request. Each FY '84 dollar will buy less than an FY '83 dollar. So EPA suffers in two ways: it receives less money in an absolute sense and has less purchasing power in a relative sense.

Can EPA operate its total array of water programs at a time when public concern over water quality has risen? Does the agency need less money to oversee and support the programs that it wants state agencies to administer at a time when State funds are also being reduced? Should we reduce funds for long-term, basic research at a time when the problems of toxic pollution control are just beginning to be uncovered?

In the last two years, EPA officials have defended the budget reductions by arguing that streamlined operations and revised regulatory programs will save money and control manpower needs. No doubt some economies have been achieved at EPA as a result of such initiatives. Further regulatory reform will not automatically translate into reduced operating needs, however.

Budget reductions of the size now proposed by EPA are not likely to yield significant improvements in effectiveness. It is much more likely that they will slow down the execution of existing programs. This should be avoided.

Specific Reactions to the Proposed Budget

Operating budget for clean water. EPA has asked for $151 million to operate its clean water programs in FY '84. This is 33% less than the $216 million Congress appropriated for FY '83. A review of its semi-annual regulatory calendar shows that the agency plans to take action on 265 regulations, 19 of them major rules. The agency also plans to review an additional set of regulations and to cancel yet a third set. In the last semi-annual report, EPA listed 256 actions, 16 of them major ones. Since the regulatory calendar has grown rather than diminished, the Federation believes that EPA has enough projects to justify keeping the FY '83 appropriation of $216 million for operations.

Of the regulations on the agenda, here is a listing of those which are considered "major actions" to the water pollution control field:

1. developing BAT compliance orders for industrial dischargers by July 1, 1984;
2. promulgating a new definition of secondary treatment for municipal dischargers, as called for in the 1981 amendments to the Clean Water Act;
3. publishing new directives for the advanced waste treatment (AWT) reviews required by Congressional direction;
4. developing effluent guidelines for the organic chemicals industry;
5. promulgating a municipal compliance policy;
6. revising the ocean disposal criteria;
7. revising water quality standards regulations;
8. promulgating guidelines for the disposal and re-use of treatment sludges;
9. developing an effective industrial pretreatment program; and
10. overseeing the creation of toxic pollutant controls.

Research and development budgets for clean water. EPA's research programs for water pollution control would be severely reduced by the proposal before your committee. The Congressional Budget Office has estimated that EPA would be devoting 70% less to clean water R&D in FY '84 than it did in FY '80, should the proposal be accepted. In particular, R&D for wastewater treatment technologies would be eliminated altogether.

WPCF finds unconvincing the theory that basic R&D for clean water can be cut back because much more is known about conventional pollution control. It also finds unwise the argument that R&D should be focused predominantly on the immediate needs of particular abatement programs.

In testimony before the House Science & Technology Committee last year, Dr. Earnest Gloyna (President-elect of WPCF) presented Congress with two WPCF reports on the long-term research needs for toxic pollutant control and for sludge management. Those reports document the seriousness of our nation's need to know more about even the most basic properties of toxic substances and sludge.

Much of the work that must be done will not be undertaken by private industry. It remains the province of government-sponsored R&D.

Russell F. Christman, editor of Environmental Science and Technology expressed this sentiment succinctly in his May, 1983 editorial. In Mr. Christman's words:

> "...our principal federal agency for protection of the environment has failed to evolve a major systematic and long-range research effort in the 13 years of its existence. Investment in broad-based understanding is badly needed, and the question really is: 'Who is to provide this function if not the U.S. EPA?'"

Every day, citizens across this country read horror stories about crises in water pollution control and water supply. What they don't read about is that the bulk of those problems can be solved. Doing so will require continual expansion of our base of knowledge, which in turn requires a strong, systematic, long-term research program. Congress has recognized this need in the past and has been critical of EPA's R&D expenditures. Continued guidance from the legislature is needed on this issue.

Some years ago, Congress directed the agency to spend at least 15% of its overall R&D budget on long-term questions. Expenditures by the agency have never reached that proportion. Long-term R&D is just getting underway at EPA. Until now, it has been under the direction of the agency's Washington office.

For FY '84, the agency proposes to move that function from headquarters and out to the regional laboratories. Yet the priorities of the regional labs are related mainly to short-term research needs of current programs. WPCF is concerned that long-term needs will be shuffled to one side if the entire program is parceled out to the regional centers.

The needs identified by the Federation will not go away. They will not become any less expensive to meet. But they will almost certainly become more important for this country to fulfill if it is to meet these two challenges effectively and economically. U.S. EPA's R&D programs for water pollution control should not be cut.

State management assistance budgets. The Administration proposes to cut federal assistance for an important group of state clean water programs roughly in half. The FY '84 request for programs authorized under Section 106 of the Clean Water Act is $24 million, 44% of the current estimate for FY '83 expenditures.

In testimony before the HUD-Independent Agencies subcommittee of the House Appropriations Committee earlier this month, representatives of state water pollution control agencies reported that it would be impossible for the States to replace federal money with more of their own. WPCF accepts this assessment of State capabilities and urges Congress not to reduce state management assistance beyond its FY '83 level.

In Conclusion

The foregoing comments touch briefly upon those clean water programs of major concern to the Water Pollution Control Federation. More detail on any of the points presented can be provided at your request. WPCF has followed the presentations of other associations and organizations in the clean water field that have dealt with the U.S. EPA's FY '84 budget. We find that those groups--whether they be professional, industry-oriented, or public interest-oriented--support a strong water pollution control budget for EPA, almost without exception.

Reviewing the actions of your committee and of your chamber regarding the agency's FY '83 budget, we are confident that you will consider all of these presentations seriously. It is, of course, the prerogative of the Reagan Administration to advocate fiscal austerity wherever it feels mandated to do so. But it is the responsibility of Congress to make sure that the needs of the moment are not satisfied by sacrificing our nation's clean water inheritance. Thank you for the opportunity to comment on this issue.

STATEMENT OF ASSOCIATION OF STATE AND INTERSTATE WATER POLLUTION CONTROL ADMINISTRATORS

ATTACHMENT A

State §106 Allotments Under the FY83 Appropriation and the President's FY84 Budget

FY 1983 and FY 1984 BUDGET INFORMATION FOR STATES

Agency: Environmental Protection Agency
CFDA Program Title: Water Pollution Control-State and Interstate Program Grants (106)
CFDA Program Number: 66.419
Budget Account Number: 68-0108-0-1-304

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(Amounts in 000 $)

State/Territory	FY 1982 Obligations Actual	Estimated Obligations FY 1983 Carryover	Estimated Obligations FY 1983 New BA	Estimated Obligations FY 1984	1984 State Estimated % of Total Based on Program Formula
Alabama	$1,380.0		$1,440.0	$628.4	.02768
Alaska	160.0		170.0	74.0	.00322
Arizona	435.0		450.0	195.8	.00852
Arkansas	760.0		800.0	348.1	.01515
California	3,330.8		3,200.0	1,392.0	.06058
Colorado	460.0		510.0	222.0	.00966
Connecticut	790.0		820.0	361.0	.01571
Delaware	752.2		460.0	200.1	.00871
District of Columbia	528.6		460.0	200.1	.00871
Florida	1,320.0		1,380.0	600.4	.02613
Georgia	1,340.0		1,700.0	739.4	.03218
Hawaii	344.0		380.0	165.2	.00719
Idaho	400.0		430.0	187.0	.00814
Illinois	1,988.4		2,030.0	883.0	.03843
Indiana	1,070.0		1,130.0	491.5	.02139
Iowa	740.0		780.0	339.4	.01477
Kansas	541.0		570.0	247.9	.01079
Kentucky	750.0		790.0	343.7	.01496
Louisiana	860.0		910.0	395.9	.01723
Maine	570.0		610.0	265.4	.01155
Maryland	1,076.1		910.0	395.9	.01723
Massachusetts	1,440.0		1,280.0	556.7	.02422
Michigan	1,830.0		1,940.0	844.0	.03673
Minnesota	1,010.0		1,020.0	443.7	.01931
Mississippi	760.0		800.0	348.1	.01515
Missouri	899.0		960.0	417.5	.01817
Montana	350.0		380.0	165.2	.00719
Nebraska	590.0		620.0	269.8	.01174
Nevada	206.0		180.0	78.4	.00341
New Hampshire	350.0		380.0	165.2	.00719
New Jersey	1,385.7		1,470.0	639.5	.02783
New Mexico	300.0		320.0	139.2	.00606
New York	3,120.0		2,990.0	1,301.0	.05662
North Carolina	1,370.0		1,990.0	865.8	.03768
North Dakota	220.0		240.0	104.3	.00454
Ohio	1,950.0		2,060.0	896.1	.03900
Oklahoma	570.0		610.0	265.4	.01155
Oregon	840.0		880.0	382.8	.01666
Pennsylvania	2,255.8		2,420.0	1,052.8	.04582
Rhode Island	549.9		560.0	243.6	.01060
South Carolina	1,020.0		1,080.0	470.0	.02045
South Dakota	230.0		250.0	108.7	.00473
Tennessee	930.0		990.0	430.6	.01874
Texas	1,850.0		2,000.0	869.9	.03786
Utah	320.0		340.0	148.0	.00644
Vermont	260.0		270.0	117.4	.00511
Virginia	1,374.3		1,360.0	591.7	.02575
Washington	1,100.0		1,160.0	504.6	.02196
West Virginia	411.3		690.0	300.1	.01306
Wisconsin	1,450.0		1,530.0	665.7	.02897
Wyoming	170.0		170.0	74.0	.00322
American Samoa	80.0		80.0	34.7	.00151
Guam	368.4		410.0	178.3	.00776
Northern Mariana Islands	50.0		50.0	21.9	.00095
Puerto Rico	892.7		870.0	378.4	.01647
Trust Territory(excl.NMI)	95.3		130.0	56.4	.00246
Virgin Islands	201.6		400.0	173.9	.00757
Indian Tribe Set Aside	...		...	...	...
Undistributed	...		...	...	...
Interstate (a)	...		1,280.0	1,022.4	...
Total	$51,338.3		$54,200.0	$24,300.0	1.00000%

ATTACHMENT B

Details on the Impacts of the President's Budget For Representative States

REPRESENTATIVE IMPACTS OF THE PRESIDENT'S BUDGET ON TOXICS CONTROL

	State	FY83 Level ($M)	President's FY84 level ($M)	Number Permits*	Major Industry
Region 1	Connecticut	0.83	.36 (- .47)	58	metal plating
	Vermont	0.27	.12 (- .15)	5	paper,petroleum
Region 2	New York	2.99	1.30 (-1.69)	198	paper,inorganics metal plating
Region 4	Tennessee	0.99	.43 (- .56)	84	plastics, metal plating
	Kentucky	0.79	.34 (- ..45)	126	coal,organics petroleum plastics
	Mississippi	0.8	.35 (- .45)	17	inorganics,plastics petroleum
Region 5	Wisconsin	1.53	.67 (-0.86)	44	paper, metal plating
Region 6	New Mexico	0.32	.14 (- .18)	2	*
Region 8	Utah	0.34	.15 (- .19)	13	coal,petroleum
	South Dakota	0.25	.11 (- .14)	1	*
Region 9	Nevada	0.18	.08 (- .10)	3	*
Region10	Oregon	0.88	.38 (-1.81)	62	paper
	SUBTOTAL	10.9	4.4	613	
	(% of Total)	(19%)	(18%)	(17%)	

* Significant, major primary industries (electric generation excluded from tabulation).

Projected Impact of the 50% Reduction in §106 Funding Proposed by the President's Budget In Select States

State	NPDES Permit Issuance	NPDES Compliance&Enforcement	Municipal Wastewater Treatment	Standards&Monitoring
Delaware	13% increase in permit delays	● 13% increase in delayed compliance ● 25% reduction in enforcement cases	eliminate O&M training & evaluation	● reduce intensive surveys ● 25% decrease in ambient stations
Georgia		● 50% reduction in Federal pretreatment program ● 50% reduction in compliance inspections	30% reduction in O&M training &inspections	50% reduction in monitoring
Illinois		● Postpone implementation of Federal pretreatment program ● 10% reduction in inspections		Suspend participation in Federal ambient monitoring network
Minnesota	● severely curtail toxic permitting ● 40-50% delay in permitting	● drop Federal pretreatment ● eliminate compliance monitoring for minors		● eliminate ambient monitoring ● severely curtail toxics monitoring assessment
Miss.	reduce permitting	poorer compliance overview		
Missouri		substantial [illegible] in inspections [illegible]nce enforcement		
Texas	25% reduction in permit issuance	25% reduction in compliance assurance		25% reduction in monitoring&assessment
Utah*	eliminate NPDES permit activities	eliminate NPDES compliance monitoring		● eliminate ambient monitoring ● eliminate WQM planning
Wash.	delay permit issuance	● reduce compliance monitoring ● reduce attention to regulating major industry	eliminate O&M inspection	reduce ambient monitoring, water quality assessment, & intensive surveys

* Utah does not have NPDES delegation but has assumed substantial responsibility in assisting US EPA with implementing the NPDES program.

COLORADO DEPARTMENT OF HEALTH

The impact of the President's proposed 56 percent reduction in Section 106 funding would have serious consequences for water quality control activities in Colorado. Our 106 funds currently support data gathering and laboratory analysis for stream classifications, permit development and enforcement, training of treatment plant operators, field support to out-lying areas of the state, stream monitoring, and ancilliary assistance to the permits program. Reductions in or elimination of any of these functions would seriously compromise our ability to meet the objectives of the Clean Water Act.

The argument that the 106 reduction can be offset by 205(g) and 205(j) funding is misleading. Although the states can convert a portion of 205(g) funds to 106 use, they (the states) must first demonstrate that the administrative requirements of the construction grants program will be met to EPA's satisfaction.

To date, we have received EPA approval to transfer $181,648 from 205(g) to 106, and hope to continue the practice as the need arises and our 205(g) reserves allow. I gather from comments made by my counterparts in other states that Colorado has greater latitude in this regard than do a number of others in Region VIII.

We have projected the budget for 205(g) funds for the duration of the construction grants program. The net effect of amending the budget to accomodate an increase in the amounts converted to make up for 106 reductions would be a corresponding shortfall in funds available to close out the 205(g) program.

The conversion of 205(j) funds to 106 use is less likely in Colorado. We believe that the use of those funds are significantly restricted in Federal law to water quality planning and stream standards setting activities. Priority is to be given to providing pass through funds to local areawide agencies in conjunction with follow-through 208 activities. In Colorado, lengthy deliberations with the areawide planning agencies has resulted in a negotiated agreement reached last month, which earmarks these funds for planning purposes, and divides them equally between the state and those areawide agencies. Any large scale conversion of the state's share would seriously compromise continuing planning efforts at the state level. Current 106 support for these activities has been minimal.

Unarguably, a reduction in 106 funds of the magnitude proposed by the President would have a negative impact on our water quality control efforts. Such a large cut would also threaten to reverse some of the progress we have made to date, and would eliminate any preventive measures. Regrettably - the cuts are proposed at a time when states are least able to accomodate them without severe program consequences. The primary impacts on our state efforts are delineated in the following table:

EFFECTS OF PROPOSED 106 CUTS ON WATER QUALITY CONTROL EFFORTS IN COLORADO

Program Cuts	Effects
• Reduction in data gathering for stream classifications and standards setting	• Slow down in review and promulgation of use classifications and standards. • Data needed to make decisions is either inadequate or unavailable.

Program Cuts	Effects
	• Information needed to develop defensible permits is lacking.
	• Water quality data needed for enforcement action is inadequate or unavailable.
Reduction in laboratory analysis of water quality samples	• Data analysis of samples would not be available.
	• Compromise effectiveness of monitoring and enforcement efforts.
	• Increased probability of stream degradation.
• Reduction in laboratory analysis of water quality samples	• Increased number of water quality problems/violators will go undetected.
• Elimination of plant operators training program	• Increased number of plants in violation of permits.
	• Increase in water quality degradation from improperly operated plants.
	• Increase in number of plants unable to meet legal requirement to employ a certified operator.
• Reduction in water quality control field support	• Serious reduction in ability to respond to citizen and local government needs.
	• Personnel, travel and operating cuts would seriously cut back out-state and west slope monitoring, investigations of citizen complaints, inventorying facilities, reviewing site applications, and plans and specifications for facilities. Delays would increase construction costs to private sector and to municipalities.
• Reduction in administrative support and guidance to water quality programs	• Slow down in administrative process with corresponding increases in costs to the regulated community.
• Reduction in water quality management planning efforts	• Inadequate planning data available for site application, plans and specs review, and permit development.
	• Reduction in data gathering and analysis needed for planning and resource management.

Program Cuts	Effects
• Reduction in stream monitoring	• Increase in number of violators.
	• Increased stream degradation.
	• Reduction in data gathering for planning, classifying and setting standards for streams.
• Reduction in stream monitoring efforts	• Limited ability to identify water quality problems and achieve goals.
• Cut back in permits program	• Delays in processing permits.
	• Increased difficulty in meeting legal timeframes for issuing permits.
	• Sound, site specific permits for effectively protecting water quality standards will be more difficult to develop.

In Colorado, the impact on our water quality control efforts will likely be exacerbated by additional cuts in state support to water quality control efforts. It is traditionally the practice of our state legislature to reduce state support proportionate to federal reductions. There is increased incentive to cut state support this fiscal year as the state is confronting a $120,000,000 deficit in revenues used to support state government. Needless to say, we are deeply concerned about the devastation such additional cuts will wreak on our programs.

In closing, we wholeheartedly support ASIWPCA's efforts to sustain 1982 funding levels and will do whatever we can to fight the proposed cuts. At your recommendation, a copy of this letter will be sent to our Congressional delegation along with a note urging them to maintain adequate support for water quality control. Please keep us informed of progress made in this regard.

FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Thank you for the opportunity to comment on the Administration's proposed 56 percent reduction of Section 106 funding.

Although Section 106 funds account for only about ten percent of our water program funds, a 56 percent reduction would result in a direct dollar-for-dollar cutback in staffing by approximately twenty positions.

Section 106 funding has remained essentially level for many years. The grant funds have not increased at the same rate as inflation and annual salary increases. Since our Legislature funds only the state's share of salary increases, it becomes increasingly difficult each year to maintain full employment with available funds. For several years, we have had to maintain vacancies in order to meet payrolls.

Declines in state revenue collections in the past year have required across-the-board funding reductions by all state agencies. In order to meet these reductions without personnel layoffs in already understaffed programs, we have drastically reduced travel and capital outlay expenditures. In addition, the 106 funds freed by the assumption of the 205(g) program were required to make up the balance of the cutback. Through the use of these measures, and by maintaining an agency-wide vacancy rate of ten percent, we have avoided layoffs thus far. Cuts in 106 funding, though a small percentage of our total program cost, will force us into a layoff situation and subsequent determination of environmental programs.

Section 205(j) funding is not a remedy to the problem since those funds are limited to use for planning and cannot be used to fund permitting or enforcement personnel. It would also be difficult to secure legislative approval for extending or establishing positions in a time of severe budget cutbacks. The Administration should also be reminded that the Section 205(j) regulations strongly suggest the use of these funds to continue Section 208-related activities by regional planning councils. Any efforts by the department to use these funds solely for internal purposes would meet with considerable resistance.

Needless to say, we are strongly opposed to any reduction in 106 funding. Cutbacks at the state level have already forced us to maintain vacancies in critical areas and further funding reductions will aggravate an already serious situation.

Georgia State Environmental Protection Division

WATER QUALITY PROGRAM STATUS
(Section 106 Water Quality Activities Only; Does Not Include
205(g), 205(j), or 208)

FY 83: Program Funding:

Federal(Section 106)	$ 1,700,000
State	$ 1,820,384
TOTAL	$ 3,520,384

Staffing Level: 91 Positions

Georgia's Delegated Programs:
- NPDES Permitting
- Industrial Pretreatment Program
- Statewide Water Quality Monitoring Program
- Emergency Response Program

Georgia's Additional Program Activities:
- Statewide O&M Program
- Operator Training Facility
- Technical Assistance and Plant Evaluations
- Effluent Sampling and Evaluation
- Review of Non-Grant Plans and Specifications

FY 84: Program Funding:

Federal(Section 106 proposed)	$ 739,400
State(assumes FY83 funding level)	$ 1,820,384
TOTAL:	$ 2,559,784

Reduction in Federal Program Funding: $960,600 (56.5%)

Reductions in Program Activities:
- Water Quality Monitoring: Reduce by 50% (frequency and number of stations)
- Industrial Pretreatment Program: Reduce by 50% (delay compliance with pretreatment requirements 1 to 2 years)
- O&M Inspections: Reduce by 30% (inspect major facilities every 18 months instead of annually)
- Compliance Inspections: Reduce by 50% (inspect facilities every 2 years instead of annually)
- Review of Non-Grant Plans and Specifications: Eliminate
- Operator Training: Reduce by 30% (eliminate or greatly reduce technical assistance in the field; scale back on training institute)

Summary:

The elimination or significant reduction of Section 106 funding would force the Georgia Environmental Protection Division to scale back its water quality activities significantly. These reductions will tend to reverse the progress that has been made in the State of Georgia during the past 20 years in the area of water quality.

205(g)

EPA is highly critical of bankrolling of 205(g) funds

Since 205(g) grants are dependent on appropriation of Construction Grant funds, some bankrolling is necessary:

- to ensure continuity of program in the event of failure by Congress to appropriate funds in a given year;
- to enable States to perform ongoing functions which are independent of grant awards in the absence of an appropriation;
- to enable States to close out completed grants;

CWA allows 205(g) funds to be used only for limited water quality activities not directly related to administration of Construction Grants.

205(j)

CWA regulates water quality functions to which 205(j) funds can be applied.

Some 205(j) funds must be passed through to areawide planning agencies to complete EPA planning activities.

Some limited 205(j) funds can be used to perform functions currently funded by 106. Only a portion of 205(j) funds would be available to offset reductions in Section 106 funding.

The maximum 205(j) grant available to Georgia is $413,620. Even maximum use of 205(j) funding for 106 activities would result in a reduction in Georgia's Federal funding level of $546,980 or more than 32%.

Public Water Supply Supervision Program

FY 83

State Funds	$1,060,800
Federal Funds	$ 552,100

Funds 55 full time positions to carry out primary enforcement responsibility under the Federal Safe Drinking Water Act and legal responsibilities and requirements of the Georgia Safe Drinking Water Act.

Program includes sanitary surveys; compliance inspections; technical assistance; laboratory analyses for microbiologicals, organics, inorganics, and radioactive contamination; certification of local laboratories; plan reviews; enforcement; data management; public notification; and program administration.

Supervising 1400 community water systems and 1500 non-community water systems.

FY 84

State Funds	$1,060,800
Federal Funds	$ 426,500

based on proposed budget (a reduction of $125,600 - 23% Reduction in Federal fur

This would require a reduction of at least four full time positions plus reductions in travel, laboratory supplies and other operating costs.

Manpower Reductions would require:

1. reduction in providing data and annual report to EPA.
2. reduction in frequency and numbers of community water supply system compliance inspections and sanitary surveys - annual inspections on 170 surface water systems reduced to once every two years - ground water systems reduced to once every four years.
3. elimination of compliance inspections and sanitary surveys on 1500 non-community systems except for emergencies.
4. eliminate review and approval of plans and specifications on all small (less than 1000 population) water supply systems.
5. reduction in the frequency of laboratory analyses on organics, inorganics and radioactive materials for all 2900 water systems.
6. reduction in responses to requests to provide technical operating assistance to small systems.

Summary

Reductions in or elimination of sanitary surveys, compliance inspections, technical assistance, plan and specification reviews and approvals, laboratory analyses of organics, inorganics and radioactive materials will greatly increase the chances of unsatisfactory quality water being served to significant segments of the public. Greatly increases the potentials for waterborne disease outbreaks and hazards to the public health.

These reductions will tend to reverse the progress that has been made in the State of Georgia during the past 20 years to provide the public with an adequate supply of good quality water.

DELAWARE DIVISION OF ENVIRONMENTAL CONTROL

Water Pollution Control Program

(Section 106 Activities Only)

FY 83

Program Funding:	
Federal (106)	$343,000
State	$639,663
TOTAL	$982,663

Staffing:	
Federally supported	12
State supported	20
	32

Water Pollution Control Programs
- NPDES Permitting (delegated)
- Industrial Pretreatment (pursuing delegation)
- Plans and Specifications review
- Water Quality Standards & Evaluations
- Water Quality Monitoring
- Effluent Sampling and Analysis
- O & M evaluations and assistance
- Operator training
- Enforcement

FY 84

Program Funding:	
Federal (106)	$200,000
State	$639,663
	$839,663

Reduction in Federal Funding: $143,000
- 12% reduction in total program
- 42% reduction in federal funding

Reductions in Program Activities

NPDES Permitting	- 13% backlog increases
Pretreatment	- 13% delay complaince by 1 year
Water Quality Evaluations	- 20% intensive surveys & evaluations decrease by 50%
Water Quality Monitoring	- 5% reduce ambient station frequency 25%
Effluent Monitoring	- 5% reduce minor discharge to 1/yr.
O & M evaluations	- eliminate
Operator Training	- eliminate
Enforcement	- 17% reduce number of cases by 25%

IDAHO DEPARTMENT OF HEALTH AND WELFARE

The U.S. Environmental Protection Agency has proposed reductions in the FY 84 budget from the FY 83 level for State water quality program grant funding and public drinking water program grant funding of 56 and 23 percent, respectively. If approved by Congress, these funding reductions would equate to a loss of about $308,000 for the State of Idaho's water pollution control and drinking water programs.

We believe you need to be fully informed of the impact such fund reductions would have on Idaho. The reduced funding would equate to a loss of seven (7) of the fourteen (14) federally funded water pollution control positions and a loss of two (2) of the ten (10) federally funded public drinking water positions.

The impact on the water pollution control program would be in the areas of enforcement, compliance monitoring, surveillance, spill response, effluent limitations development, and data processing. For EPA to take up the slack and carry out these program areas as required by the Clean Water Act would cost the federal government as much and likely more than State administration of the program (the federal government pays 25 to 50 percent more than state government for comparable positions). If EPA resources were not bolstered, then the goals of the Clean Water Act and Idaho's water quality would suffer as a result.

Idaho has been delegated primacy for the federal drinking water program and is administering that program at a minimum resource level. With a loss of 20 percent of our resources, it is likely that Idaho could no longer operate a program meeting the requirements of the federal Safe Drinking Water Act. If that happened, EPA would be required by law to operate the drinking water program in Idaho which would be very costly to the federal government.

We understand the federal budget problems and support the current administrations efforts to try to hold the line on the budget. We, too, are having budget problems at the State level with several holdbacks coming this fiscal year. In anticipation of federal and state budget cuts, the Department proposed legislation which would have authorized the Legislature to appropriate funds for part of the administration of the water quality program from the Water Pollution Control Account (WPCA), a dedicated fund. The proposed legislation, Senate Bill 1063, would also have authorized any water pollution control fees collected by the Idaho Department of Health and Welfare to be paid into the WPCA as a new funding source. Senate Bill 1063 was sent to the Senate floor with "no recommendation" where it went down to defeat. There seemed to be an obvious consensus that the Legislature does not want those members of the public who receive water pollution control services (such as review of plans and specifications for subdivision sewage treatment and disposal facilities) to pay a greater share of the costs of administering the program than the general public. Therefore, it is apparent that the federal government should not expect the Idaho Legislature to replace reduced federal funds.

We hope the above information will be of assistance to you in making a decision on federal environmental program grant funding for FY 84 and future years.

Please do not hesitate to call me at (208) 334-4079; Lee Stokes, Administrator, Division of Environment, at (208) 334-4061; or Al Murrey, Chief, Bureau of Water Quality, at (208) 334-4250 if you need additional information.

STATE OF ILLINOIS

The State of Illinois has been a very active participant in the National Clean Water program. The Illinois EPA received approval from USEPA to manage the NPDES program in 1977 and the federal construction grants program in 1978. The State's water quality management plan which was prepared under Section 208 of the Clean Water Act, was fully approved by USEPA in 1980. We have steadfastly worked to become full partners in the management of the national program. However, we are distressed to report that this relationship is now threatened by the budget for Section 106 state grant funds proposed by USEPA for FY84.

The proposed 56% reduction in Section 106 grant funds would adversely impact the Illinois program. USEPA is not correct in their assertion that Section 205(g) and 205(j) funds represent "overlapping" or substitute funds for the base 106 program grants. This line of faulty reasoning could seriously jeopardize the basic fiscal integrity of state water pollution control programs. USEPA's budget justification is also ill-served by referencing "user fees" as a means for supporting state programs. The following analysis addresses the funding situation in Illinois which will serve to reinforce our criticism of USEPA's proposal for Section 106 funding.

Illinois EPA received a $2.03 million Section 106 grant for FY83. These funds are still utilized for a wide range of program activities including 21% for permitting activities, 25% for compliance and enforcement activities, 32% for monitoring activities and 7% for planning activities. Since Section 106 funds have been relatively constant for many years, it has been necessary to fund a significant portion of the State's water quality planning activities from other sources. From FY78 to FY82, Section 208 grant funds served to fill this gap in program support. Fortunately, 205(j) funds became available for support of planning activities when 208 appropriations were terminated. However, instead of separate support grants from USEPA for each of the Areawide Agencies and the State Agency as was the case under 208, the 205(j) setup puts all the planning demands under the same funding set-aside. USEPA regulations require cooperative programs of continuing planning between the State and the Areawide agencies. Thus, for FY83, Illinois EPA has received a 205(j) grant that is shared on a 50/50 basis with Areawides under a pass-through agreement. The State's share of this grant barely covers the loss in previously available 208 funds, let alone be expected to cover additional program activites as envisioned by USEPA.

Because of the purposeful design of the Illinois program, we will have carryover funds under 205(g) from FY83 to FY84. However, this backlog of "reserve" funds is absolutely essential for the long-term integrity of the state and federal construction grants programs. This reserve is needed to ensure funding the close-out of the grants program which we estimate will take from two to four years after funding for new construction grants terminates. We believe our first responsibility to Congress lies with maintaining a high level of accountability for the federal dollars spent on construction of wastewater facilities. We cannot accomplish this assignment without adequate funds for program management during the phase-out period when new set-aside funds will not be available. We have provided for these vital contingency funds by carefully limiting the amount of non-construction grants related activities to be supported by the 205(g) set-aside for Illinois. In addition, both 205(g) and (j) funds represent direct reductions in funds available to assist local communities in building wastewater facilities. Thus, we have always maintained that funding of the state program using these set-asides should be limited, as much as practicable, to municipal grants and compliance activities.

Under the USEPA proposal for FY84, the Illinois EPA would receive about $1.1 million less in Section 106 grants supports. For the reasons provided above, the 205(g) set-aside funds cannot be used to offset this reduction. Thus, we project the following scenario to cope with such a reduction if approved by Congress:

1) Reallocation of about $438K of 205(j) set-aside funds from Areawide Planning Agencies to the Illinois EPA. This change would just about shut-down the areawide planning efforts for water quality in Illinois.

2) Suspend state operations for the 38 "CORE" stations that are part of the National Ambient Water Quality Monitoring System. These stations represent about 19% of the statewide ambient network. We would have to assume that that USEPA would be willing to take over the operation of these stations to maintain their national water quality trends system.

3) Delay state participation in implementation of the federal pretreatment program in Illinois.

4) Suspend NPDES activities relating to federal facilities. In Illinois, a little more than 1% of our point source dischargers involve federal facilities (37 out of about 3,300).

5. Reduce NPDES related inspection efforts by about 10%.

6. Restrict the scope of facility-specific assessments done for toxicity impacts under the NPDES program.

One final comment in relation to user fees is appropriate at this time. Over two years ago, Illinois EPA began the process of setting up permit fees as a source of supplemental funding. For many reasons, not the least of which is lack of support from the regulated community, we have yet to implement a permit fee system. We are still actively pursuing this option, but must advise that such funds will not be readily available in time to help support the environmental program in Illinois during FY84.

STATE OF MICHIGAN

The protection and management of Michigan's environment will be jeopardized if the administration's proposed Fiscal Year 1984 budget for environmental programs is approved. We again need your help to maintain federal funding for state environmental programs.

The Administration has proposed a 17 percent reduction in federal support for air quality programs under Section 105 of the Federal Clean Air Act, a 56 percent cut in support for water quality programs under Section 106 of the Federal Clean Water Act, the elimination of funding for the Clean Lakes Program, a four percent reduction in support for hazardous waste programs under Section 3011 of the Federal Resource Conservation and Recovery Act and the elimination of toxic substances enforcement funding. The Administration has proposed a total reduction of 26 percent (a cut of $60 million) in federal appropriations which support state environmental and resource management programs.

The Administration has also proposed substantial cuts in programs aimed at protecting the Great Lakes. The Great Lakes provide drinking water for ten percent of the nation's population. Collectively, the Great Lakes contain one-fifth of the world's surface fresh water supply. The Great Lakes are of vital importance to the economic strength of the entire nation. The Administration's proposal to cut more than $2.5 million in Great Lakes research programs (elimination of the National Sea Grant Program and Great Lakes research at NOAA and closure of the Great Lakes Environmental Research Lab are proposed) will seriously erode our ability to detect problems and afford proper management of this important resource.

Collectively, these cuts would have a drastic impact on Michigan's environmental programs. The processing of environmental permits will be slowed significantly, adding to the substantial permit backlog which already exists. Permits are the basic means for identifying, controlling and monitoring pollution sources. Compliance activities, including facility inspections, would be cut, jeopardizing our ability to identify illegal pollutant sources. Environmental monitoring and emergency response programs will be nearly eliminated. Without sustained federal support, we may also be forced to return certain program responsibilities to the U.S. Environmental Protection Agency which have been delegated to Michigan.

The EPA has suggested several ways that the impact of these cuts could be minimized. We believe EPA's proposals are unrealistic.

For instance, EPA has proposed that states institute user fees to replace the lost federal funding. In Michigan, fees which provided partial support for our air and water quality programs in the past are being phased out under state law. Given Michigan's economic climate and the clear mandate to reduce the cost of doing business in this state — we do not believe additional fees on business and industry are feasible. EPA also claims that they have reduced costs through regulatory streamlining of programs and by "management efficiencies". While we support such initiatives, the impact of these efforts has not been felt at the state level in terms of reduced administrative resource costs for collaborating with EPA in managing environmental programs.

EPA has also proposed that states may want to use funds available under Section 205(j) of the Federal Clean Water Act to offset the proposed 56 percent reduction in Section 106 Clean Water Act funding. The Section 205(j) funds were appropriated by Congress to provide for water quality management planning activities. The act specifically states that regional and other local agencies are to receive priority consideration in the allocation of these funds. The Michigan Department of Natural Resources has established a good working partnership with Michigan's regional and local agencies in implementing the Section 205(j) program, consistent with the intent of Congress. We do not believe it is responsible for EPA to suggest that states operate contrary to the law by reserving the bulk of Section 205(j) funding for state programs. In essence, EPA is pitting the state agencies against the regional and local agencies to resolve their funding proposal. Full funding support for both Section 106 and 205(j) should be maintained.

The protection and management of Michigan's environment is clearly a shared concern of Michigan's citizens, elected officials and government. Vital programs to control discharges of toxic substances to our air and waters, to carefully manage hazardous wastes and to clean up environmental contamination cannot be provided if these cuts occur.

We respectfully seek your assistance in restoring federal support for environmental programs.

We are available to assist you in any way possible.

TENNESSEE DEPARTMENT OF PUBLIC HEALTH

We in the State of Tennessee are deeply concerned about the Environmental Protection Agency's proposed budget cuts in the water pollution control (Section 106) grants to states. The proposed cuts this year are even greater than last year's proposed cuts which, fortunately, were restored by Congressional action.

During the past few years our 106 program has suffered from increased federal regulations without increased federal funding. This trend continues; for example, the proposed revisions to the water quality standard regulations will place a heavy administrative and financial responsibility on the states without providing any resources; instead, proposing massive cuts in federal support.

Tennessee has suffered a tremendous shortfall in state revenue collections which has adversely impacted our pollution control program and other federally delegated programs. A further degradation in federal support would be critical and will result in environmental degradation through our inability to regulate water quality. Tennessee is especially impacted by having more interstate traffic of hazardous waste than any other state. We feel there is a federal responsibility for providing financial support to environmental programs in the states.

We support the efforts of ASIWPCA and others to maintain the federal responsibility of providing financial support to state water programs.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Background

The President's budget for FY1983 proposes a 56% cut in the CWA Section 106 grant nationwide (from $54.2 M in FY83) to $24 M. For New York, this means a total funding reduction of $1.65 M, from $2.96 M in FY83 to $1.31 M projected for FY84. In FY83, the 106 Grant funded 66 positions within the Department of Environmental Conservation and provided over $550,000 for funding of indirect support activities.

If the proposed Section 106 reductions are carried through for FY84, the Department will loose 37 positions funded through the Grant, and more than half of the indirect support monies.

EPA is saying that two other grant programs are available to supplement Section 106: Sections 205(g) and (j). The Agency justifies the 56% cut in Section 106 funds because of this "overlap" in water grants.

The Clean Water Act Section 106 Grant is a program grant, intended to provide support for the administration of a State water quality program. The Section 205(g) Grant is given primarily to support delegated Construction Grants Management, with residuals available to help support the delegated NPDES program. Finally, Section 205(j) funds are provided for the development and maintenance of water quality management plans, including setting of stream and facility specific conventional and toxic pollutant limits, based upon water quality needs.

Impact

The Department of Environmental Conservation, through its Water Division has "factored in" the availability of CWA Section 205(g) & (j) monies to support management of a water quality program for the upcoming State Fiscal Year. Section 205(g) is anticipated to pay for about 90 man-years of Water Program effort, Section 205(j) is expected to support about 35 man-years.

All funding sources for the water quality program were projected to assure support of a lean, but viable, water program which would focus upon active control of toxic discharges to both surface and groundwater driven by water quality needs.

If the proposed Section 106 cuts are legislated, our pollutant control program will be reduced to basics. Permits for both surface and groundwater discharges would be issued using technology standards for both toxic and conventional pollutants. Obviously, permit monitoring and enforcement would follow only to this extent. Water quality needs beyond technology based limits would not be considered.

Control of industrial toxic discharges to municipal facilities would fall directly and wholly upon the permitted communities. The Department would be able to provide minimal oversight, and no technical/administrative guidance.

Management of critical groundwater aquifers would not be possible on a case and site specific basis. Again, point source dischargers would receive technology based permits. Non-point sources and other groundwater impacts could not be evaluated or managed on an aquifer specific basis.

These effects follow simply because most resources in a regulatory agency are devoted to direct oversight and management of the regulated parties. Resources for program development, management, and initiatives are incremental to the basic regulating mandate and, therefore, scarce.

Specific Program Eliminations/Reductions

Groundwater Management Program -

The Department would have to abandon development of regional strategies for critical aquifers and redesign development of a Statewide program stressing technology based controls and response to problems. This is in opposition to current strategy based upon water quality controls and active management/prevention of pollution. Savings would not occur as the entire program would have to be redirected from current development efforts. Such redirection would need EPA approval.

Mapping and Modeling of Critical Groundwater Aquifers -

We would have to abandon these efforts which are designed to provide much of the base for active management of the groundwater resource.

Design of a Network to Provide Ambient Groundwater Quality & Quantity Data -

This work could not be accomplished and the ability to monitor ambient conditions for critical aquifers would not be available.

Establishment of Water Quality Toxic and Conventional Pollutant Based Effluent Limits -

This manpower intensive effort would have to be abandoned. We would have to rely in all cases upon technology based limits (BAT/BPJ) for new and renewed discharger permits.

Maintain and Revise Water Quality Plans and Standards -

States have maintained a minimal effort in this area since the close of the active Section 208 program. We would attempt to carry out these activities only on waterbodies where municipal construction grants are scheduled for beyond 1983 (to protect funding).

Stream Surveys and Modeling as Background for Water Quality Based Effluent Limits -

These efforts efforts would be abandoned as we could no longer afford to write water quality based permits.

Identification of Priority Pollutants/Ambient Thresholds/Detectability -

These activities would be eliminated as we would have to abandon all capability to write water quality based permits.

Surface Water Quality Surveillance Network -

The Water Division now maintains a toxic and conventional pollutant ambient water quality surveillance network on major waterbodies.

(The toxic portion was developed recently at the sacrifice of a more comprehensive historic conventional network.) The present network would have to be further reduced in scope, and value.

Development and Maintenance of a Pretreatment Program -

The Department would have to abandon all hope of active program management and community assistance. Instead, we would rely upon the tenuous ability of permitted communities to pursue the program alone.

Hudson River PCB's -

USEPA recently denied the Departments' proposal to remove a significant amount of the PCB's (and manage the entire situation) through a CWA Section 201 Grant. We would be forced to virtually walk away from the issue with the Section 106 cuts that are presently proposed. Development of any viable management/monitoring effort would not be possible.

Mississippi Department of Natural Resources

The President's FY'84 budget proposes to reduce Mississippi's Section 106 Grant from $800,000 in FY'83 to $348,100 in FY'84. This cut of $451,900 or 56.5% would obviously require substantial adjustments in the way we currently discharge program responsibilities as described below.

First of all, we would seek to minimize the adverse impact of this cut by transferring activities from 106 to 205(g) and 205(j) funding. Although some relief in eligible activities would be realized from available 205(g) funds, we are currently overspending the 205(j) funds available in FY'83 and would derive no benefit from that funding source.

After these activity transfers we would have little choice but to reduce program staff since supportive services have long since been reduced to an absolutely minimal level. Since the program is comprised mainly of permitting and enforcement activities this is where the preponderance of personnel reductions would occur. Peripheral activities would also be reduced but savings would be minor.

The obvious and unavoidable result of such staff reductions would be poorer compliance overview, reduced and delayed enforcement response and less reliable monitoring data for decision making. Since EPA would also lack needed funds to replace our loss of capability, we would lose our credibility as effective regulators and facility compliance rates would deteriorate from the present level.

If forced into this predicament by financial constraints it would be very difficult to again reach the degree of success we currently enjoy in administering the requirements of the Water Pollution Control Act, PL 92-500.

MINNESOTA POLLUTION CONTROL AGENCY

I am writing you in response to your request for input into the ASIWPCA position regarding EPA's proposed budget reduction in Section 106 funding. I am enclosing a detailed discussion of how this reduction impacts Minnesota's water quality management programs. This is prepared given our best calculations as to what the proposed 56 percent drop in federal support would have on our program activities.

In general, the Agency's water quality management program would be severely impacted by such a reduction. Certain programs efforts would be eliminated and others would be curtailed. The Agency will be forced to reduce our efforts in things like, monitoring, permitting and enforcement. I believe these reductions are serious enough that the integrity and credibility of the Agency as a protector of the State's environment may very well be at stake.

In light of considering other federal grant support as under Section 205, the Agency is already heavily committed to priority programs as defined under the Delegation Agreement for the construction grants program. In addition, the Agency is embarking on a resource intensive effort in order to comply with EPA and Congressional objectives set forth in the Clean Water Act Amendments of 1981. Section 106 grant funding losses are just that and can not be picked up by other federal funding sources.

I hope these comments will be helpful for input into the Congressional debate over the EPA's proposed budget cut-backs for FY 1984. Please contact me, if I can provide further information.

SECTION 106 WATER QUALITY PROGRAM

1. Overview

For FY 1983 the Minnesota Pollution Control Agency (MPCA) is receiving $1.020 million of Section 106 funding. In turn the MPCA matches these funds with $1.681 million direct State Legislative appropriation and $1.134 million in indirect for a total state match of $2.815 million. In FY 1983, Minnesota is supporting 72% of the 106 Water Pollution Control Program. For FY 1983 the 106 Program funded 89 positions of which 37 were supported by federal 106 funding.

The FY 1983 water quality program under Section 106 supports the following major program functions in the Division of Water Quality:

(1) Program Management and Planning (Sections 106 and 303(e))*
(2) Water Quality Monitoring and Standards Development (Section 303)
(3) Facilities Operations and Training (Sections 201 and 205)
(4) NPDES Permits (Section 402)
(5) Compliance Monitoring (Sections 308 and 309)
(6) Enforcement (Sections 308 and 309)
(7) Emergency Response (Section 311)

* The ( ) denote the specific Sections of the Clean Water Act relating to the identified program functions.

2. Federal Reductions in FY 1984

The prospects for the Section 106 Program for FY 1984 suggest a potential of significantly decreased resources. A federal Section 106 appropriation of $24.000 million would represent a 56% decrease in federal support. Minnesota's base federal 106 program for FY 1983 is $1.020 million. A 56% decrease would result in only $0.449 million for FY 1984. This amount would allow the MPCA to fund only twelve positions from federal resources. Even at the same level of funding as FY 1983, the FY 1984 program would not be able to fund ten federal positions because of salary inflation. The proposed federal reductions coupled with potential state reductions would result in a greatly decreased general water pollution control program.

Under this scenario, the State's water quality management programs would be affected as follows:

(1) The ambient and toxics monitoring program would be dropped. This would mean the water quality data record (since 1953) would not maintain current data on water quality conditions. The consequence of this would cause the disruption of a 30-year continuous period of record. In turn, permitting and enforcement programs activities which rely on current and accurate data will be without its use. With increased emphasis on toxic controls, less data will be available to evaluate for toxics. The MPCA would probably rely upon the dischargers (permittees) to provide monitoring support. In addition, this effects the MPCA's ability to develop water quality standards due to the lack of adequate baseline data.

(2) The NPDES permit program would be reduced requiring a longer processing time for issuance of permits. The processing time would be increased by an estimate 40 to 50%. The additional impact would reduce the MPCA's ability to issue permits on schedule and require some dischargers to operate without permits. In addition, the toxic discharge review of permits would be impacted since the MPCA would not be able to perform as thorough an evaluation.

(3) The pretreatment program would be dropped and delegation returned to EPA. This means the MPCA would no longer manage and operate the pretreatment program; thus, requiring EPA to administer out of their regional office. This means approximately 58 communities would have to work with the federal government where the state (MPCA) is more familiar with the program and in dealing with these communities.

(4) The minor facilities compliance monitoring would be eliminated. The MPCA's effort would be reduced to responding only on a needs basis. This means the 1300 NPDES permittees would not be monitored for compliance purpose as required under the federal law.

(5) The industrial facilities review program would be eliminated. The result will be an elimination of providing technical assistance to industrial facilities. Industry would be forced to present technically sound projects or face the consequences of future enforcement actions due to non-compliance.

(6) The municipal facilities operation assistance program would be reduced. Operations assistance to communities will be severely curtailed. Also, support in providing wastewater treatment plant operators with appropriate

training opportunities will be reduced. This would cause approximately 300 facilities operators to go without certification allowing wastewater treatment facilities to operate without qualified operators.

(7) The basin survey and monitoring programs would be reduced and the lake survey program would be eliminated. The greatest impact will be the potential for significant delays to the construction grants projects requiring advance treatment reviews. Non-construction grant related monitoring efforts would be reduced to reacting only on a critical needs basis.

The above briefly describes the potential effect on a 56% federal reduction on the water quality program. In the long-term, this specific scenario could expand as the federal reduction in future fiscal years continue and/or increase.

This scenario reflects those ongoing program areas that will either be reduced or eliminated all together. This scenario does not take into account the increase emphasis in certain program areas being mandated by the Clean Water Act. Such areas as toxic controls and water quality standards development require additional resources beyond those available under a 56% Section 106 reduction and under Section 205(j). These program areas are more complex and require the continuation of a stable funding level of the state's water quality program.

3. Summary and Effects

In summary, the potential FY 1984 reduction of $571,000 and 25 positions represents approximately a 28% overall reduction in the level of effort of the State's water quality management and water pollution control program.

The major effects would be in the program areas of ambient and compliance monitoring, permit issuance, pretreatment and toxic discharge control. In general, the effect of a 56% reduction on the water quality program translate to an elimination of certain permitting and enforcement activities. In addition, this may mean a return of specific delegated activities to EPA where the state no longer can afford to administer, even though the state is still in the best position to manage an effective program.

In light of considering other federal grant support as under Section 205(g) and 205(j), the MPCA is already heavily committed to priority programs as defined under the Delegation Agreement for the construction grant program. In addition, the MPCA is embarking on a resource intensive effort in order to comply with EPA and Congressional objectives set forth in the Clean Water Act Amendments of 1981. Thus, Section 106 grant funding losses are just that and will not be picked up by other federal funding sources nor by future State Legislative appropriations.

In the long term, the effects of this potential reduction will increase degradation of water quality throughout the State. General water quality monitoring efforts that evaluate conditions of surface waters will be eliminated. Compliance monitoring of minor dischargers will go unabated. Permitting and enforcement will be reduced and compliance with water quality goals will fall to the dischargers themselves. Development of toxic controls and water quality standards will be extended beyond the Clean Water Act deadlines. Progress that has been made over the past ten (10) years will be lost. Finally, the integrity and credibility of the MPCA's cleanup program may very well be at stake.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

WATER POLLUTION CONTROL PROGRAM FUNDING ANALYSIS
2-14-83

The following is an analysis of the impact on Missouri of the proposed Reagan Administration's budget request which reduces Section (106) funding by 56% for FY 1984.

Background

	106 Funding	Missouri General Revenue Funding	Total
FY 81	$860,000	$297,000	$1,157,000
FY 82	$899,000	$274,000	$1,173,000
FY 83	$960,000	$269,000	$1,229,000
FY 84	$417,500	$256,000 (Gov's. request)	$ 673,500

The State of Missouri experienced a 13% overall reduction in general revenue in FY 82 and an additional 10% in FY 83 due to the depressed economic conditions. Although the general revenue appropriation for 106 match did not equate to that level of cuts, it is unrealistic to believe that any increases in general revenue appropriations will be available for the water pollution control program in the forseeable future, when it will have to compete with educational and social programs which were cut by the generally reduced amounts of 13% and 10%.

In FY 82 Missouri began using 205(g) funds to support a limited portion of the NPDES permitting activity. This is being continued in FY 83.

205(g) funding to support any significant non-construction grant related work in the future, will not be possible without seriously jeapordizing the integrity of the program for closing out ongoing construction grant projects should Construction Grants be terminated as the Administration currently plans.

205(j) funding from FY 82 funds has already been committed to water quality management planning studies to be conducted by outside contractors. Plans for use of FY 83 funds are being developed in a similar manner.

205(g) and 205(j) funds are a percentage of the construction grant appropriation. If there is no construction grant appropriation, there are no funds available.

Missouri passed a constitutional amendment (Hancock Amendment) which severely limits the states taxing and spending authority. Fees for administration of the program would have to be approved by a vote of the people. The municipal league and other organizations are opposed to fee proposals and it is extremely unlikely that fees can be implemented in the forseeable future.

The Missouri legislature passed a bill in FY 82, establishing a separate State Construction Grants Program. The Water Pollution Control Program is responsible for carrying out this program. No increased general revenue funding was provided for administering this program. This further exemplifies our General Assembly's position that increased general revenue funding for program operation is not likely to occur.

In FY 84 Missouri will assume the delegated Construction Grant activities currently performed by the Corps of Engineers.

Section 106 and the matching General Revenue funds, form the core for the water pollution control effort in Missouri. This includes funding for planning, water quality monitoring and analysis, state grants management, NPDES permit administration including inspection and enforcement, operator training and certification, pretreatment, and emergency response.

Missouri supports the NGA and ASIWPCA position for maintaining 106 funding as a minimum at the FY 82 level.

EPA is on record as requesting expanded state effort for the proposed municipal compliance strategy, improvement of PSC computer data, and an improved and expanded inspection and compliance program.

Reductions of 106 funding will result in significant reductions in inspections, and compliance enforcement activities, since these are the areas where most of the funding is currently being used.

The idea of reliance on self monitoring reports to replace state inspection and samplings has been advanced. Much of the self monitoring data received in Missouri is of questionable validity. We do not believe this is a viable alternative to state inspection and sampling to insure compliance.

In summary, stable 106 funding is the lifeblood for a continuing stable water pollution control effort in Missouri. No alternate sources of funding are available. Reductions in funding, will directly result in reduced water pollution control effort, primarily in the inspection and compliance enforcement areas.

NEVADA DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

I have reviewed the legislative amendments to the Clean Water Act proposed by EPA and those introduced by Senators Chafee (RI) and Randolph (WV), Senate Bill 431. I have three areas of concern.

106 Water Pollution Control Porgram Support

I support continuation of the 106 program grants at their current level. I believe this level of support is necessary to conduct viable state programs. 205(j) funds earmarked for Water Quality Management activities, will not bridge the gap created by reducing support to the $24 million level as proposed by EPA.

Penalties

I have no objection to increasing criminal penalties for willful violation or authorizing administrative penalties provided that states with NPDES programs are not required to adopt identical authority.

Permit Term Extension

I believe that the present maximum term is not adequate. Periodic review of major permits is required to ensure adequate protection of the nation's waters, however, we need the flexibility to issue longer term permits to prevent an undue burden on a state's permitting resources.

Thank you for keeping me advised of developments affecting water pollution control programs.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

F/Y 84 FEDERAL ADMINISTRATION BUDGET ANALYSIS

PROGRAM: Water Pollution Control

FEDERAL STATUTE: P.L. 92-500, Section 106

FUNDING COMPARISONS:

ACTUAL F/Y 82	ACTUAL F/Y 83	EPA $ ANTICIPATED F/Y 84	OMB $ PROPOSED REDUCED F/Y 84 LEVEL	TOTAL $ N.J. LOSS F/Y 84
$1,400,000	$1,470,000	$990,000	$540,000	EPA Cut $480,000 OMB Cut $930,000

PROJECTS AFFECTED: State's Water Pollution Control Program - primarily the enforcement and water quality monitoring programs.

COUNTIES AFFECTED: Statewide Program

STAFF AFFECTED: A possible staff reduction of 20-25 positions, Divisionwide with the EPA cut, and 40-45 positions with the OMB cut. These would be in the Enforcement Element and the Monitoring & Planning Element.

STATEWIDE IMPACT: If alternate funding sources could not be obtained (options include 205j, 205g or NJPDES $) the total impact would seriously affect both the Enforcement work (NJPDES Permit Compliance) and the ambient Water Quality Monitoring Program (Basic Water Quality Data Base).

PROGRAM: Safe Drinking Water Act

FEDERAL STATUTE: P.L. 93-523, Section 1443 (a)

FUNDING COMPARISONS:

ACTUAL F/Y 82	ACTUAL F/Y 83	EPA $ ANTICIPATED F/Y 84	OMB $ PROPOSED REDUCED F/Y 84 LEVEL	TOTAL $ N.J. LOSS F/Y 84
$635,500	$501,900	$380,000	$370,000	EPA Cut $121,900 OMB Cut $131,900

PROJECTS AFFECTED: Administration of the State's Public Water Supply Program under primary enforcement authority granted by EPA.

COUNTIES AFFECTED: Statewide Program

STAFF AFFECTED: A possible staff reduction of four to five positions. Three of these are support positions outside the Division of Water Resources. Two of the positions would be in the Division's Bureau of Potable Water.

STATEWIDE IMPACT: The loss of funding for direct program personnel would impact water systems evaluations, potable water permits issued, potable water investigations, and related enforcement work.

PROGRAM: Underground Injection Control

FEDERAL STATUTE: P.L. 93-563, Section 1443(b)

FUNDING COMPARISONS: -

ACTUAL F/Y 82	ACTUAL F/Y 83	EPA $ ANTICIPATED F/Y 84	OMB $ PROPOSED REDUCED F/Y 84 LEVEL	TOTAL $ N.J. LOSS F/Y 84
$93,900	$100,000	$82,000	$78,000	EPA Cut $18,000 OMB Cut $22,000

PROJECTS AFFECTED: State's Underground Injection Control Program - Primary objective is to prevent contamination of present and potential underground sources of drinking water from subsurface disposal and storage of fluid wastes.

COUNTIES AFFECTED: Statewide Program

STAFF AFFECTED: No staff reductions would be necessary, however, the loss of program funds would reduce the money available for operational needs.

STATEWIDE IMPACT: The impact of the proposed cuts, EPA & OMB, would be a total reduction of $22,000. This would necessitate some adjustments in the operating budget, but would not appreciably limit the effectiveness of the program.

STATE OF TEXAS

The proposed $24 million included in the President's FY 84 budget request for the Section 106 program will reduce the Texas share of those funds from $1,890,000 per year to approximately $836,900. The Texas level of effort required to receive the Section 106 grant funds is $3,582,000 which means for FY 83 the federal/state dollar mix was 34.5% federal and 65.5 % state. The $836,900 which Texas would receive under the President's proposed budget would reduce the overall 106 program to $4,418,900 and the federal/state mix would be 18.9% federal and 81.1 % state. The reduction would affect three water pollution control activities in Texas - administration of the permit program, monitoring and assessment and enforcement. The permit program would be reduced from the present 27 work years to 20.1 work years with a corresponding drop in the output of issued and reissued permits by 25% or from 400 per year to 292 per year; the monitoring and assessment activity would be reduced from 16.3 work years to 12.2 and a corresponding drop in the level of effort in the statewide monitory network, EPA's basic ambient monitoring program and intensive water quality surveys. The enforcement activity would be reduced from 59.6 work years to 51.9 with a corresponding reduction in the compliance assurance program, operation and maintenance inspections and response to citizen complaints.

WASHINGTON STATE DEPARTMENT OF ECOLOGY

THE EFFECTS OF A 56% CUT IN EPA 106 WATER QUALITY FUNDS FOR FY 84 ON THE WASHINGTON STATE DEPARTMENT OF ECOLOGY

A cut of 56% would reduce our current funding level ($1,167,000) by $653,520 for a FY 84 balance of $513,480. This equates to 34% reduction to our total water quality program for FY 84.

The reductions would have a significant impact on our response time to all water quality problems and would lead to partial, and in some cases, total elimination of certain water quality functions. The result would be a state agency that would be severely limited in its ability to fulfill its minimum responsibilities to the public in the area of water quality. Thus endangering not only the environment, but also the public's safety. Some of the more specific impacts are as follows:

I. Compliance monitoring

Reduction in this activity would result in reduced capability to address known wastewater discharger compliance problems and would also decrease the agency presence in the field which would reduce the incentive for dischargers to achieve/maintain permit compliance. It also would result in an increase in the number of undetected water quality violations.

II. Operation and maintenance inspections of municipal wastewater treatment plants.

Virtual elimination of followup to scheduled inspections with the probable result that many O&M problems which are uncovered will not be corrected.

III. Ambient water quality monitoring and related laboratory services:

Any reduction in ambient monitoring in freshwater (currently 72 stations) would result in less information on WQ status and a reduced capability to analyze WQ trends. It also would adversely impact ability to establish WQ standards or effluent limits for unionized ammonia, metals, etc. The latter are expected to be required in order to protect beneficial water uses.

IV. Intensive surveys and related laboratory services:

We would have a reduced capability to address known water quality problems, provide "before-after" information for various facility improvements, or evaluate various proposed discharges.

The following nine surveys have been proposed for FY 83: Port Gardner and Inner Grays Harbor, Commencement Bay, Budd Inlet and Deschutes River and tributaries, Chehalis River, Yakima River North and Yakima River South, Moses Lake, Spokane River and tributaries, Puget Sound and coastal estuaries. The 56% cut would eliminate 5 of these surveys. The result would be potential damage to municipal wastewater facilities and/or to receiving water quality due to decisions which will have to be made with or without the information which would be provided by these surveys. A lesser impact would be the loss of information with which to evaluate the impact of wastewater facility modifications.

V. Water Quality management for aluminum, pulp and paper, and petrochemical firms.

Decrease in regulatory attention to state's major industries and their wastewater management activities.

VI. Permits, NPDES and State Waste Discharge.

This activity's reduction would result in delays in the issuance, reissuance and modificatons of federal and state waste discharge permits. The turnaround time would be greatly increased for all wastewater facilities plan reviews while thoroughness would decrease. The response to public water quality complaints would also be significantly reduced and in some cases eliminated.

STATE OF UTAH

EFFECT OF PROPOSED 106 BUDGET REDUCTION

The 106 budget cuts proposed by the Administration would amount to about a $200,000 reduction in the budget of the Utah Bureau of Water Pollution Control. This would require a staff reduction of 6 FTE's which is 1/3 of our non-construction grants professional staff.

If this occurs, most of the federally related program functions would be dropped. These functions would include NPDES permit activities, NPDES compliance monitoring, ambient monitoring, and water quality management planning.

Utah is not a delegated NPDES State. However, we are heavily involved with drafting of most permits, compliance monitoring and assisting EPA with enforcement. All of these responsibilities would be turned completely back to EPA with the state involvement being only to certify permits. Ambient monitoring would also be greatly reduced which would have negative impacts on future 305(b) reports, enforcement of water quality standards, and future revisions to water quality standards.

The water quality planning function would be reduced by half which would all but eliminate the nonpoint source control program and also eliminate the possibility of meaningful future 305(b) reports or timely revisions to water quality standards.

We have no "excess" 205(b) funds to replace lost 106 funds. The EPA Region is asking that we keep sufficient funds in reserve to keep the construction grants management function operating for a period of 2 years after 205 funding ends. Utah now has only sufficient funds to do this, but if these funds are diverted to other purposes, there would be no way to manage the construction grants program to its completion after new funding ceases.

The possible use of 205j funding is even more of an illusion. This funding is only about one-half the proposed 106 cut on an annual basis. This minimal funding is now barely maintaining a local water quality planning function to deal with nonpoint source issues. This local function will end without continued federal funding and it will be a substantial loss to the overall water pollution control program.

SUBCOMMITTEE RECESS

Senator GARN. The subcommittee stands in recess until 10 a.m. tomorrow when we will continue to receive testimony from public witnesses concerning the various agencies' budget which fall under the jurisdiction of the subcommittee.

The subcommittee stands in recess.

[Whereupon, at 3:30 p.m. Monday, May 23, the subcommittee was recessed to reconvene at 10 a.m. Tuesday, May 24.]

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT-INDEPENDENT AGENCIES APPROPRIATIONS FOR FISCAL YEAR 1984

TUESDAY, MAY 24, 1983

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m. in room SD–124, Dirksen Senate Office Building, Hon. Jake Garn (chairman) presiding.

Present: Senators Garn, Abdnor, and Huddleston.

NONDEPARTMENTAL WITNESSES

HEARING PROCEDURE

Senator GARN. The subcommittee will come to order.

Today is our second day of testimony from public witnesses. We will be addressing the issues concerning the National Science Foundation, National Aeronautics and Space Administration, and the Department of Housing and Urban Development.

I would like to remind each of our witnesses if they would confine their presentation to a maximum of 5 minutes with the understanding that the full statement will be placed in the record.

Our first witness today is Dr. Izaak Wirszup, professor of mathematics at the University of Chicago.

NATIONAL SCIENCE FOUNDATION

STATEMENT OF IZAAK WIRSZUP, PROFESSOR OF MATHEMATICS, UNIVERSITY OF CHICAGO

Senator GARN. Doctor, we are happy to have you with us.

Please proceed.

Dr. WIRSZUP. Honorable Senator Garn, I am most grateful for the invitation and the opportunity to present testimony before your committee here today.

My testimony is to what leads this committee to lead the U.S. Senate and the country as a whole in launching a national mobilization for quality education.

The 1981 hearings which you conducted, Senator Garn, have played an important part in enhancing national awareness of the role of education, particularly in the sciences, mathematics, and technology, in our

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security and economic prosperity. I am proud to have been able to offer testimony at those hearings.

The subcommittee's investigative efforts have undoubtedly struck a responsive chord in the administration, as reflected in several statements on mathematics and science education in President Reagan's State of tbe Union Address of January 25,

The President is absolutely correct in his assertion that, "Government at all levels can and must participate in improving these tools of growth." At the national level, Congress should participate and demonstrate its foresight and commitment by leading the Nation in a coordinated renewal of secondary education in this country.

The gravity and urgency of the situation require actions of an altogether different order of magnitude from any proposed so far by the various commissions studying the problem. Is "tide of mediocrity" really a strong enough term to describe the threat our public education faces?

Before the appearance of any national commission reports, you, yourself, Senator Garn, demonstrated keen understanding and exemplary leadership in dealing with issues in our educational crisis. I have in mind your letter of February 17, 1983, to Dr. Edward Knapp, Director of the National Science Foundation.

This masterful statement, now a public document, offers a strategy and an agenda for national action in the crucial but neglected areas of curriculum development and implementation, elementary education, and research in the psychology of learning and teaching science and mathematics. It helps restore to science education and manpower training the status they deserve.

I believe you are the first congressional leader to offer a precise statement of the issues to be faced and the methods to be employed by the NSF and the Department of Education. By clarifying the proper responsibilities of these two institutions, you have indicated how our decentralized educational system can compete with the highly centralized systems of our allies and economic competitors and those of the Communist-bloc countries, which have made tremendous investments in science education and manpower training over the past 17 years.

Although the Department of Education has come in for its share of criticism, the national interest absolutely demands that this Department be strengthened through new responsibilities, new life, and new purpose.

The fact remains that the Department of Education, together with the NSF Office of Scientific and Engineering Personnel and Education, represents the equivalent of a U.S. ministry of education. The campaign to abolish the Department of Education at a time when the Nation sorely needs national educational leadership and guidance is simply incomprehensible to any serious educator.

Clearly, both the National Science Foundation and the Department of Education have a major role to play in our national educational mobilization. In assigning responsibilities to these agencies, we must bear in mind their respective capabilities and strengths. In particular, I urge that you allow NSF to continue to make program award decisions on the basis of quality and merit and that you not assign NSF responsibility for block or formula grants. NSF works closely with the scientific community and not with State and local school systems, and it, therefore, focuses on competition with respect to quality and merit.

Budget constraints being what they are, NSF should have priority in the allocation of resources, for the NSF has demonstrated that it can have a disproportionate impact using the small sums it has been given, in spite of the fact that the NSF Office of Scientific and Engineering Personnel and Education has been decimated.

Of course, we can take pride in the achievements of a small but superb corps of top-level scientists and in our major universities and their graduate programs, the best in the world.

We may note, for example, that the United States is still the world leader in science and technology. But we cannot fail to observe that this preeminence has been eroding over the past decade.

From the point of view of civic education—fostering an appreciation of freedom and democracy—our schools are among the finest anywhere. But we should also scrutinize our well-documented problems in primary and secondary education in light of achievements elsewhere. American students are surely no less capable than those in Russia or Japan, but a relative lack of commitment and organization in our educational system has kept them—and our Nation—from attaining their full potential.

I believe that the comparisons and arguments presented in my written statement clearly demonstrate the need for drastic measures to revitalize secondary education. Whatever amount of national attention our educational problem receives in public discussion in the next month or the next year, this attention, by itself, does not constitute more than the most superficial beginnings of an answer to the problem.

This is a long-term problem, the culmination of tendencies developing over at least half a century. To counter these tendencies, we must mount a sustained effort, a genuine national mobilization for education.

The focus of a national educational mobilization can only be sustained and developed by a catalyst on a national level, embodied by a continuing national concern from the executive office and the Congress.

I would recommend: (1) A congressional mandate for a Federal office for educational quality in the executive office; and (2) a standing agency for development of long-range initiatives in science, mathematics, and technology education under the Office of Science and Technology.

I am not proposing, Senator Garn, agencies for the disbursement of large undifferentiated grants. The agencies proposed would serve in a leadership role to formulate, stimulate, advise, and guide efforts on the State and local levels. These agencies would serve as a vehicle for sustaining the national thrust toward quality education.

In 1941, the United States was caught underprepared militarily to face the juggernaut of Nazi Germany and Imperial Japan. After Pearl Harbor, however, we mobilized quickly and mounted the greatest effort the world has ever witnessed to defend democracy and freedom.

The present challenges—both economic and military—to our national survival require an educational mobilization. Such a bold step now, and a promise of continuing vigilance in the future, will reassure America's friends and allies that this country will never lack the manpower or the mindpower to resist tyranny and aggression.

National educational progress requires national leadership; it is just as vital to our future as a comprehensive and purposeful foreign policy and defense.

I appeal to you and this committee, Senator Garn, to lead a bipartisan effort in the U.S. Senate on behalf of a national educational mobilization. You will have the support of all segments of our society and the gratitude of generations of Americans to come.

Thank you.

I submit herewith, for the hearing record, a statement of May 24, 1983, addressed to you, Senator Garn.

Senator GARN. Thank you.

We will be happy to include your entire statement in the record. The facts that you cite about the state of our educational system are certainly very sobering. The President has recently highlighted the significance of this problem in his state of the Union speech, and also after the report by the Commission, which happened to be headed by the president of the University of Utah.

I agree that we have got to talk about a long-range, sustained effort if we are going to succeed in improving the educational system. Unfortunately, Congress operates so much in starts and stops that it is difficult for us to look beyond the next election. I do think that it has got to be a long-range effort. It has got to involve all segments of the society. It has got to involve scientists and teachers and participants and school administrators and the private sector as well, in order to accomplish that. So I certainly intend to continue my efforts to identify and to support the appropriate role for the Federal Government in this mix.

The committee very much appreciates your advice and your guidance in this area.

Thank you, very much.

Dr. WIRSZUP. I am most grateful, Senator Garn.

Thank you.

[The statement follows:]

STATEMENT OF IZAAK WIRSZUP, PROFESSOR OF MATHEMATICS, UNIVERSITY OF CHICAGO

My testimony here today is directed toward urging this Committee to lead the U.S. Senate and the country as a whole in launching a national mobilization for quality education.

The past hearings which you have conducted, Senator Garn, as Chairman of the HUD-Independent Agencies Subcommittee have played an important part in enhancing national awareness of the role of education--particularly in the sciences, mathematics, and technology--in our security and economic prosperity. I am proud to have been able to offer testimony at those hearings on June 3, 1981.

The Subcommittee's investigative efforts have undoubtedly struck a responsive chord in the Administration, as reflected in several statements on mathematics and science education in President Reagan's State of the Union Address of January 25, 1983. The President is absolutely correct in his assertion that "government at all levels can and must participate in improving these tools of growth".

I am therefore returning with an urgent appeal that you, Senator Garn, and the members of this committee assume leadership in a bipartisan congressional drive to mobilize American education. Congress should participate, and demonstrate its foresight and commitment by leading the nation in a coordinated renewal of secondary education in this country.

In the past three years I have had the privilege of addressing over 60 conferences dedicated to educational improvement and manpower training, attended by representatives of various segments of American society: not only the scientific and educational communities, but also leaders of industry, business, labor, and State and Federal Government. The purpose of these addresses has been to promote an awareness of critical problems in American precollege education and to enlist cooperation and support in the search for solutions.

The positive response to my work from these groups has been very gratifying. I was especially encouraged by the strong moral support I received from you, Senator Garn, from Sen. Charles H. Percy, Sen. J. William Fulbright, Federal officials, State Governors (including Gov. Harry Hughes), and leading members of the National Academy of Sciences and the National Academy of Education. Even more gratifying, however, is the appearance of a growing movement in several states to improve education and manpower training for their economic recovery. In addition, various national commissions have been established to upgrade education, among them

--the National Science Board Commission on Precollege Education in Mathematics, Science and Technology

--the National Commission on Excellence in Education

--the National Task Force on Education for Economic Growth, a coalition of governors and businesses, labor, and academic leaders headed by Governors Hunt and du Pont and the former Chairman of IBM, Frank Cary.

These are unquestionably valuable efforts that speak to a number of diverse aspects of the educational crisis.

Particularly effective in drawing the public's attention to the state of secondary education has been the recent "open letter to the American people" A Nation at Risk: The Imperative for Educational Reform. The result of 18 months' work by the National Commission on Excellence in Education, this superbly written document has been widely and favorably discussed in the media. The recommendations of the report rightly focus on the alarming shortage of teachers, especially in mathematics and science; raising high school graduation requirements and admission requirements for State colleges; basic literacy tests as a condition for obtaining a high school diploma; and encouraging industrial and business leaders to participate more extensively in helping school systems. These are important recommendations. However, a number of crucial issues have not been addressed at all. These require a far stronger and broader response than any proposed. The report, for example, understates the facts concerning our educational crisis, even in comparison with newspaper reports published in the last three years; it does not deal adequately with the crucial issues of curricular and structural reforms and their implementation; and it only hints at the drastic measures that must be taken to remedy a situation best described as catastrophic. Is "tide of mediocrity" really a strong enough term to describe the threat to public education? Mrs. Barbara Bush, the wife of the Vice-President, has reported that since the 1950's the United States has dropped from

18th to 49th among the most literate of the 157 members of the United Nations. Are Americans not entitled to know the emergency and the enormity of the situation?

A sober and authoritative voice is now being heard from the National Task Force on Education for Economic Growth, established by the Education Commission of the States of the National Governors Association. One of its panels assembled by Governor Hunt and David Hamburg, President of the Carnegie Corporation, strongly recommends that the Federal Government assume a leadership role in developing an educational system that meets the needs of our technological society. The panel's report concludes: "The failure to attend to our educational system is the equivalent of unilateral disarmament."

I would like to note that even before the appearance of any national commission reports, you yourself, Senator Garn, demonstrated keen understanding and exemplary leadership in dealing with issues in our educational crisis. I have in mind your letter of February 17, 1983 to Dr. Edward Knapp, Director of the National Science Foundation. This masterful statement, now a public document, offers a strategy and an agenda for national action in the crucial but neglected areas of curriculum development and implementation, elementary education, and research in the psychology of learning and teaching science and mathematics. It helps restore to science education and manpower training the status they deserve.

The letter also provides an invaluable perspective on the proper role of the National Science Foundation--especially with regard to the Department of Education. This represents a significant step toward eliminating duplication of functions, and it will greatly facilitate joint programs and mutually beneficial cooperation. I believe you are the first Congressional leader to offer a precise statement of the issues to be faced and the methods to be employed by the NSF and the Department of Education. By clarifying the proper responsibilities of these two institutions, you have indicated how our decentralized educational system can compete with the highly centralized systems of our allies and economic competitors and those of the communist-bloc countries, which have made tremendous investments in science education and manpower training over the past 17 years.

Although the Department of Education has come in for its share of criticism, the national interest absolutely demands that this Department be strengthened through new responsibilities, new life and new purpose. The fact remains that the Department of Education, together with the NSF Office of Scientific and Engineering Personnel and Education, represents the equivalent of a U.S. "Ministry of Education". The campaign to abolish the Department of Education at a time when the Nation sorely needs national educational leadership and guidance is simply incomprehensible to any serious educator.

Clearly, both the National Science Foundation and the Department of Education have a major role to play in our national educational mobilization. In assigning responsibilities to these agencies, we must bear in mind their respective capabilities and strengths. In particular, I urge that you allow NSF to continue to make program award decisions on the basis of quality and merit and that you not assign NSF responsibility for block or formula grants. NSF works closely with the scientific community and not with State and local school systems, and it therefore focuses on competition with respect to quality and merit.

Budget constraints being what they are, NSF should have priority in the allocation of resources, for the NSF has demonstrated that it can have a significant impact using the small sums it has been given, in spite of the fact that the NSF Office of Scientific and Engineering Personnel and Education has been decimated.

In my testimony thus far, I have often referred to the present situation in American education as a "crisis". Of course, we can take pride in the achievements of a small but superb corps of top-level scientists, and in our major universities and their graduate programs, the best in the world. We may note, for example, that the U.S. is still the world leader in science and technology, but we cannot fail to observe that this preeminence has been eroding over the past decade. From the point of view of civic education--fostering an appreciation of freedom and democracy--our schools are among the finest anywhere. But we should also scrutinize our well-documented problems in primary and secondary education in light of achievements elsewhere.

Allow me to review the following facts and comparisons to illustrate the gravity of our predicament and justify my choice of words.

Of some 4 million American students who reach the age of 17 each year, 75% have been taught arithmetic for 9 years. Nine years of repetitious drill is a waste and a terribly damaging experience. The resulting feelings of stagnation and incompetence are a cause and a symptom of the deplorable state of U.S. mathematics and science education and technical training. In other industrialized countries, children complete arithmetic in 6 years. The Russians, in fact, cover arithmetic in the first five grades and even start algebra in grade 5.

While the great majority of Americans are struggling with nine years of arithmetic, Soviet students are working through a challenging and comprehensive compulsory mathematics curriculum that comprises 6 hours per week in grades 1-8 and 5 hours in grades 9-10 (a total of nearly 2,000 class hours over 10 years). In this 10-year period the Soviet program covers the equivalent of at least thirteen years of American schooling in arithmetic, algebra and calculus, and does so much more thoroughly and effectively. It includes continuous and extensive treatment of plane and solid geometry, and culminates in a calculus course taught in grades 9 and 10.

What has helped to make this remarkable achievement possible is that from the fourth grade on, mathematics is taught by a specialized mathematics teacher whose training is equivalent to at least a master's degree program in mathematics in the United States. Even elementary school teachers (grades 1-3) receive extensive training in mathematics, the sciences, and educational psychology and teaching methodology based on advanced research.

Comparisons in geometry are even more disturbing. Only half of our population takes one year of plane geometry. Yet most of these students simply never learn geometry, because we attempt to teach it in a single year, while empirical evidence and modern educational psychology tell us emphatically that we cannot. Furthermore, our high school students are not being taught solid geometry. Therefore, they rarely have a workable perception of three-dimensional space, which is so essential to many areas of science, technical design, and engineering. In contrast, all Soviet students study geometry over a 10-year span: 5 years of intuitive geometry, 3 of semi-rigorous plane geometry, and 2 of solid geometry.

American secondary school physics, another building block of science education and technical training, is in disastrous condition and must be changed radically. Less than a fifth of our high school students take even a one-year course in this discipline, while in the USSR all secondary school students take a compulsory five-year sequence of physics courses. The total number of physics teachers for some 16,000 U.S. school districts is less than 10,000 and shrinking rapidly. The total number of physics teachers in the Soviet general education day schools alone is 123,000, and the USSR trains another 8,500 specialized physics teachers every year.

Our educational crisis is by no means limited to mathematics and the sciences. Only 16 percent of our students receive any exposure to geography as a separate subject, mostly in the form of one-semester courses. Geography teaching has all but disappeared. It is hardly surprising that Army studies of our recruits reveal "a markedly lower ability to read maps and recognize enemy targets." The Soviet Union, on the other hand, trains over 6,000 specialized secondary school geography teachers each year to conduct a 5-year sequence of compulsory courses in the physical, economic, and political geography of the USSR and the world. The total number of geography teachers in the Soviet general education day schools is 98,000.

Moreover, all Soviet children are obliged to take 7 years of a foreign language, while fewer than 18 percent of U.S. public high school students study any foreign language, and fewer than 4 percent receive more than 2 years of foreign language study.

Similar comparisons could be drawn with most of the countries of Western Europe and Japan, and even with South Korea and Taiwan. According to the National Task Force on Education for Economic Growth, "the typical Japanese high school graduate has the equivalent of roughly four full years more than an American high school graduate." Despite these strict standards, Japan has a graduation rate of 95% (the Soviet Union's is 98%) compared to our 72%.

Soviet training programs for skilled workers and white-collar technicians are based on a general secondary education which includes mathematics, physics, chemistry, geography, economics, international relations, history and foreign language and corresponds to at least 13-14 years of the best American schooling, obtained only by the top few percent here. A comparison of the number of degrees awarded to engineers, technicians, and skilled workers in the U.S. and the U.S.S.R. is especially alarming. It shows that in 1979 the Soviets awarded the equivalent of 12,000 doctoral and 402,000 master's degrees in engineering compared to the corresponding U.S. figures of 2,500 and 16,200. What's more, NSF data show that 47% of the students in American master's and doctoral programs in engineering are foreign students on temporary visas. Equally disturbing is the fact that in 1979 alone the Soviet Union produced over 3,000,000 white-collar technicians and skilled workers. 2,000,000 of these graduated from technicums and secondary technical-vocational schools with training equivalent to 2-3 years at an average U.S. engineering college. In contrast, only 104,000 associate degrees in science and engineering-related curricula were awarded by U.S. community colleges that year.

These brief comparisons indicate a particularly dangerous gap between our educational standards and those of the Soviet Union. Even in this twenty-sixth year since the launching of the first Sputnik, it is not generally recognized that the USSR's expanded exercise of power is based on more than just the military arms buildup of the past two decades. Its concurrently developed science education and manpower training programs have created a military-industrial machine manned by highly skilled and educated personnel. The Soviet Union's unprecedented achievements in the education of the general population and development of a vast manpower pool in science and technology are having an unprecedented impact on that country's scientific, industrial, and military strength.

The Need for an American Educational Mobilization

When I took a close look at the Central Committee's resolution of November 1966, following the 23rd Communist Party Congress, and the resulting developments, I noted the Soviets' frequent use of the term "educational revolution." I soon realized, however, that this was actually an "educational mobilization" of the USSR's entire young population, and it is this term that I use to describe it.

In 1966, when America was mired in Vietnam and there could be no threat to Soviet security from the US or any other country, the Soviets undertook simultaneously

1) the greatest arms buildup the world has ever witnessed, and

2) the first educational mobilization to satisfy the needs of their burgeoning military-industrial complex.

I became personally convinced back in 1979 that the only way we could face the Soviet challenge would be to launch our own educational mobilization. At that time I sent a report to the National Science Foundation that first described the Soviet challenge in science, technology, and engineering training programs, presenting statistical data and details of their 15-year educational mobilization. This report became a factor in President Carter's order of February 1980 to NSF and the Department of Education for a review of our science and engineering educational policies. The resulting study, Science and Engineering Education for the 1980's and Beyond, published in October 1980, corroborated my findings, which first had been greeted with shock and disbelief.

Until recently, my reports on the Soviet educational mobilization and its tremendous investments in technical manpower training programs often met with objections. A frequent reaction was that Soviet educational achievements should not be taken seriously since the Soviet Union supposedly is "an economic basket case," its economy "on the verge of collapse." In January of this year, however, a study for the Joint Economic Committee of Congress conclusively refuted these claims.

The study revealed that from 1950 to 1980 the Soviet economy has experienced major growth as reflected in the following data:

--The gross national product has increased at an average annual rate of 4.6 percent, and has quadrupled over the last three decades.

--Industrial production has increased seven times.

--Farm output has doubled.

--Per capita consumption, while still below Western levels, has tripled.

According to Senator William Proxmire, "the Soviet Union is perhaps the most self-reliant industrialized nation."

In 1960 and 1970 the U.S.A. was first in the world in Gross Domestic Product per capita, but in 1980 it dropped to tenth place, behind nearly all West European countries.

Whatever amount of national attention our educational problem receives in public discussion in the next month or the next year, this attention by itself does not constitute more than the most superficial beginnings of an answer to the problem. This is a long-term problem, the culmination of tendencies developing over at least half a century. To counter these tendencies, we must mount a sustained effort, a genuine national mobilization for education.

Some commentators have remarked on the failure of efforts to improve education in the period after Sputnik. Yet if one examines the facts, those efforts failed for one reason above all. The impulse and the effort were not sustained, because of the naive hope that a short-range or one-shot effort could solve deep-seated long-term problems. What a contrast to Soviet or Japanese programs sustained and developed decade after decade.

It takes 20 years to produce a qualified scientist or engineer, of which the first 10-12 years of training are crucial. If our public schools cannot attract and hold students to the sciences, a generation of future scientists will be lost forever. Yet, as the standard measures of academic performance show, our educational system is producing fewer and fewer able students in all fields.

These are challenges that our infatuation with sophisticated management techniques cannot help us meet. Leaders of American industry must recognize, as their foreign competitors already do, that there is no substitute for technical experience and innovation. We must acknowledge that an educated population and a well-trained manpower force are essential to the recovery of our economic leadership and national defense.

This will require, above all, creativity, energy, and wisdom. Our goal should not be to imitate Soviet achievements, methods, or systems, but to conceive whatever new forms of American education are necessary to preserve our freedom.

Fortunately, the general public is showing increased awareness of the intricate relation between the state of our educational system and our economic position and national security. Representatives from every segment of society, from leaders of industry to concerned parents, are looking for national leadership and a program to solve the present educational crisis. Society needs guidance, purpose, and hope. It will then be ready to make serious commitments to an educational revival. To give up, to procrastinate, or to plan only for the short term would be to mortgage our freedom and our future.

The present crisis in U.S. mathematics education has brought calls for new teacher training, new curricula and materials, and new "technological" instructional media. For reforms to have a lasting impact, however, they must be based on a genuine understanding of the nature and development of the conceptual and cognitive processes involved in learning mathematics.

The Soviet Union has made tremendous efforts over the past 40 years to study the psychological aspects of mathematics learning. This has resulted in a large body of outstanding research and unexcelled levels of mathematics achievement for the general population. Focuses of Soviet research include principles of mathematical conceptualization, problem-solving, logical reasoning, programmed instruction, spatial perception, and methods of discerning and developing mathematical abilities.

At an NSF Project Directors' meeting, back in February 1981, I made the following recommendations for structural changes and curricular reforms beginning with the first grade:

--Allow only specialized teachers to teach mathematics and science courses from grade 5 on.

--Establish continuing improvement and retraining programs for primary school teachers, especially those who teach arithmetic in grades 1-4. Inservice and preservice programs should be devoted primarily to teaching content, particularly the fundamental concepts of mathematics and science.

--Organize new programs, and expand existing ones (such as summer programs), for the discovery and training of talented children from the earliest possible age.

--Greatly expand the system of preschool education. Appropriate teacher training programs should be introduced for this level. Children from the age of three or four would become acquainted in an organized way with the concept of number, the basic ideas of geometry, and underlying patterns and relationships in mathematics and science.

--Organize or expand continuing education programs for our adults who need additional training. We must enable individuals to understand and appreciate new developments in science and technology and offer them an opportunity to study in depth. Schools from secondary level up should be used, as well as museums and popular media.

--Develop a completely new mathematics program for all children, covering all of arithmetic in the first 6 years of school. Intuitive geometry should be an integral part of the new program from the first grade on. Introduce algebraic thinking in the last two years of this 6-year program.

--Offer all students in grades 7-9 a new 3-year sequence in algebra and a separate, parallel 3-year sequence in semi-rigorous geometry, each taking 2 or 3 class hours per week.

Programs and textbooks for the American 1-year physics and chemistry courses which resulted from the post-Sputnik national curriculum reforms are generally extensive, comprehensive, and modern. They have served a valuable function in training a new corps of outstanding scientists from among our academically superior students. Yet these "packaged" one-year courses are, like our geometry course, written at the highest secondary school (or even college) development level in each of these subjects. For the general population these courses are simply inappropriate, and this is one of the main reasons why enrollments in physics and chemistry are so alarmingly low.

In the Soviet compulsory 5-year physics sequence, the student is first offered two years of intuitive, descriptive and experimental physics 2 hours per week; then he is exposed to physics for 3 years (3, 4 and 5 hours per week, respectively) at increasingly higher levels of sophistication, rigor, and organization. Also, Soviet research in the psychology of learning and teaching mathematics and science has been aimed particularly at achieving this kind of level-by-level mastery.

The "packaged" one-year course in physics (which no other nation in the world has adopted) should be replaced by a multi-year sequence (2-3 class hours per week). The same applies to our one-year chemistry course.

To continue, we should:

--Introduce a completely new sequence of courses called "Technology and Engineering" (2-3 hours per week), to begin in grade 7 and to be offered to all students in all school systems. The curriculum should combine, whenever possible, both theoretical and practical studies, ideally using modern and well-equipped shops at selected nearby industrial or commercial enterprises.

--Make optimal use of calculators and microcomputers in the new mathematics program. The abundance of these tools in the U.S. should be exploited to greatest advantage at all educational levels, starting in the primary schools. In high school, offer separate courses in computer science, probability and statistics, and solid geometry, in addition to the existing courses in advanced algebra and calculus.

—Accompany these comprehensive organizational and curricular reforms with research and development programs, giving special attention to integration of the sciences, particularly in their relation to mathematics. This research should be applied to the interrelationships of subjects and the establishment of a logical order of presentation in the school curricula at each level.

—We must create permanent national curriculum centers and a national review board in science and technology. These bodies should consist of the nation's top scientists and technical experts with an understanding of education, scholars, outstanding teachers, psychologists, and educators, who would supervise the development of new curricula and review the implementation and progress of programs and text materials.

—A prerequisite for all changes, of course, is basic literacy. Innovative courses, sophisticated textbooks, and superior professional guidance will all go for nought if students are unable to read or write. It is therefore essential that we upgrade the graduation requirements for English in high schools to 4 years. To help create a global perspective and provide the background for an understanding of international relations, business, and foreign cultures, geography (2 years), foreign language (2 years), world history, and economics should also be included among basic requirements. It is enough to recall, for example, that teachers of English in the Soviet Union outnumber students of Russian in this country.

The focus of a national educational mobilization can only be sustained and developed by a catalyst on a national level, embodied by a continuing national concern from the Executive Office and the Congress. I would recommend

1. a Congressional Mandate for a Federal Office for Educational Quality in the Executive Office and

2. a Standing Agency for development of long-range initiatives in science, mathematics, and technology education under the Office of Science and Technology.

I am not proposing agencies for the disbursement of large undifferentiated grants. The agencies proposed would serve in a leadership role to formulate, stimulate, advise, and guide efforts on the state and local levels. These agencies would serve as a vehicle for sustaining the national thrust toward quality education.

Proposed Agencies

Some of the responsibilities of these two agencies would be:

1. To monitor national and international developments and gather information; to supervise national and international comparative studies of education; to monitor new trends in education and manpower training programs in a rapidly changing technological world.

2. To develop a strategy and a national agenda to be implemented by the most decisive and creative leadership in the area of immediate, short-term, intermediate, and long-range goals.

3. To serve as education spokesman and advisor to the Federal Government; to develop unified national policies on educational matters that are beyond the capabilities of state and local agencies; to make recommendations to Congress and the Executive Branch on education.

4. To coordinate the activities of the Department of Education and the NSF Office of Scientific and Engineering Personnel and Education, and to work together with the National Academies and professional and educational societies.

5. To organize and coordinate research and development centers in various disciplines; to organize and coordinate curriculum development centers.

6. To inform, advise and otherwise assist state and local education efforts; to define and coordinate the optimal interworking of Federal, State and local education efforts.

7. To help promote and develop partnerships between educational institutions, on the one hand, and industry, commerce, labor, and government on the other.

In 1941 the USA was caught underprepared militarily to face the juggernaut of Nazi Germany and Imperial Japan. After Pearl Harbor, however, we mobilized quickly and mounted the greatest effort the world has ever witnessed to defend democracy and freedom. The present challenges—both economic and military—to our national survival require an educational mobilization. Such a bold step now, and a promise of continuing vigilance in the future, will reassure America's friends and allies that this country will never lack the manpower or the mindpower to resist tyranny and aggression.

Leaving educational progress to the individual states and localities has brought mixed results that the country as a whole can ill afford, especially in this time of recession. Along with resounding successes, like the North Carolina School for Mathematics and Science in Durham, there are thousands of stagnating schools in areas that simply lack the perspective and the resources to institute badly needed changes. National educational progress requires national leadership; it is just as vital to our future as a comprehensive and purposeful foreign policy and defense.

American education must not be allowed to sink to the level of a charity case. It is a crucial resource that must be developed. Even more than funding, it needs firm, practical leadership.

I appeal to you and this committee, Senator Garn, to lead a bipartisan effort in the U.S. Senate on behalf of a national educational mobilization. You will have the support of all segments of our society and the gratitude of generations of Americans to come.

Thank you.

STATEMENT OF DR. PHILIP H. JORDAN, JR., PRESIDENT, KENYON COLLEGE

Senator Garn. Next, I would like to call Dr. Phillip H. Jordon, Jr., of Kenyon, on behalf of the Great Lakes Colleges Association.

Doctor, we are happy to have you with us today.

Dr. Jordan. Thank you very much.

Mr. Chairman, thank you. I have submitted a written statement for the record, and I would like to emphasize a few points in my oral statement, please.

I am delighted to appear before this subcommittee as you consider the fiscal year 1984 appropriation for the National Science Foundation.

I represent, as you know, 25 colleges in two consortia of liberal arts colleges in the Midwest, and also Reed College in Oregon. They are colleges that are widely recognized for their overall academic quality and colleges which are also justly proud of their past record and continuing role in producing men and women who become research scientists in this country.

But I also represent, unofficially, other undergraduate colleges nationwide with similar records and similar potential for continued importance in science education and research.

I testify for undergraduate colleges with high academic standards and with faculties who are teacher-scholars engaged in serious work in their disciplines. The colleges that I speak for believe that the National Science Foundation should play an important role in sustaining quality research among our science faculty.

I want to emphasize—and I think the point cannnot be overstressed—that the small undergraduate liberal arts colleges of quality are a crucial link in the chain of science education that prepares research scientists, a chain that begins in the schools, that continues through the college year, and concludes in graduate training.

At a quality liberal arts college the undergraduate science student becomes, in effect, an apprentice to a faculty mentor who is a practicing scientist and the students learn science by doing science research in collaboration with the principal investigator on his campus. From such colleges science graduates go on in a steady stream to the finest graduate schools and to enter careers in science. The record of quality undergraduate colleges in producing professional scientists can be illustrated by examples and by statistics.

At Kenyon College, as I noted in my written testimony, a number of our alumni have become prominent scientists. Probably the best known of these is Carl Djerassi of the class of 1942, a chemist at Stanford, who developed the first oral contraceptive and also chemical methods for insect control.

For the other colleges I represent, one might note Roger W. Sperry, Oberlin, 1935, a psychologist at Cal Tech, who won a a 1981 Nobel Prize for split brain research; John A. Simpson, Reed, 1940, a physicist in cosmic regular research and advisor to NASA for unmanned space exploration; and Stephen J. Gould, Antioch, 1963, Harvard geologist and author of an award-winning study of theories of genetic determination. A complete list of graduate scientists just from the six institutions named would be much, much longer.

A statistical study of the productivity of scientists by the colleges I represent was recently presented in preliminary form to the Director of the National Science Foundation. I will turn the figures to the subcommittee for the record, if I may.

[The information follows:]

A Preliminary Comparison of Baccalaureate Origins of Ph. D.'s in Certain Scientific Disciplines: Ten Major Baccalaureate Sources, Eight Leading Technical Institutes, and Two Undergraduate College Consortia

This Associated Colleges of the Midwest preliminary study is based on official U.S. Government figures. Throughout we are comparing the undergraduate origins of Ph. D.'s, not Ph. D.'s granted by particular institutions. The basic years we are comparing are Ph. D.'s earned 1974–80 and baccalaureates granted 1970–76. Thus, in lagging the Ph. D. output by 4 years, we are comparing graduate output to the undergraduate base from which it was derived.

"Ten Major Sources" are leading university producers of baccalaureates going on to obtain the Ph. D.[1] They are the University of California—Berkeley, the City University of New York, University of Illinois, University of Chicago, University of Wisconsin, Harvard University, University of Minnesota, University of Michigan, Columbia University, and Cornell University.

"Eight Leading Technical Institutes" are among the schools specializing in science and engineering education which are leading producers of baccalaureates going on to Ph. D.'s.[1] They are the Massachusetts Institute of Technology, the California Institute of Technology, Rensselaer Polytechnic Institute, Rice University, Lehigh University, Illinois Institute of Technology, Polytechnic Institute of New York, and Virginia Polytechnic Institute, and State University.

The member colleges of the Associated Colleges of the Midwest are Beloit College, Carleton College, Coe College, The Colorado College, Cornell College, Grinnell College, Knox College, Lake Forest College, Lawrence University, Macalester College, Monmouth College, Ripon College, and St. Olaf College.

The member colleges of the Great Lakes Colleges Association are Albion College, Antioch University, Denison University, DePauw University, Earlham College, Hope College, Kalamazoo College, Kenyon College, Oberlin College, Ohio Wesleyan University, Wabash College, and The College of Wooster.

BASIC STATISTICS: ACM, GLCA, TEN MAJOR SOURCES AND EIGHT LEADING TECHNICAL INSTITUTES

	Number of institutions in group	Undergraduate enrollments 1976 FTE	Baccalaureates granted, 1970–76	Expanded physical science Ph.D.'s awarded[1] to their graduates 1974–80
Associated Colleges of the Midwest ..	13	16,911	27,224	982
Great Lakes Colleges Association	12	22,288	32,447	1,272
Ten major sources	10	159,052	238,138	9,009
Eight leading technical schools	8	36,356	47,050	3,709

[1] Expanded physical sciences, life sciences, and psychology.

PH. D.'S RECEIVED BY GRADUATES IN CERTAIN FIELDS, 1974–80, COMPARED WITH ALL BACCALAUREATES GRANTED, 1970–76

[In percentages]

	Basic physical sciences	Basic biological sciences	Basic physical and biological sciences	Basic physical and biological sciences and psychology
Associated Colleges of the Midwest ..	1.2	1.0	2.2	3.1
Great Lakes Colleges Association	1.0	1.1	2.2	3.3
Ten major sources	.8	.9	1.7	2.5
Eight leading technical institutes	2.8	1.1	3.9	4.2

Column 3 shows the ACM and GLCA colleges have a higher productivity in the basic sciences than the 10 major university sources and run from under two-thirds to three-quarters of the productivity of the 8 technical institutes (depending on whether psychology is included).

The ACM and GLCA colleges emerge as clearly more productive than the other institutions when one makes a final comparison: that of the Ph. D.'s earned by graduates with baccalaureates granted in those fields. We have made this comparison only for the expanded physical sciences. There are some data problems in developing the same comparisons for biological sciences. We anticipate the same results would emerge if it were possible to make expanded biological sciences (life sciences) Ph. D./baccalaureate comparisons in the same manner as the expanded physical sciences data shown in the column below:

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[1] Selection based on a study by Albert B. Stewart, Antioch College (Jan. 1967), "Changes in Baccalaureate Origins of Doctorates in the Sciences."

Ph. D.'s in expanded physical sciences earned by graduates, 1974–80, compared with baccalaureates granted in the same fields, 1970–76

	Percent
Associated Colleges of the Midwest	14.1
Great Lakes Colleges Association	15.9
Ten major sources	10.3
Eight leading technical institutes	12.6

SOURCES: "CY 1920–CY 1976 Doctorates by Baccalaureate Institutions in 31 Doctoral Fields, 3 Time Periods," unpublished statistics of the National Academy of Sciences, Washington D.C. 1977.

"1974–75 Doctorates by Baccalaureate Institutions," unpublished statistics from the Doctorate Records File, National Research Council, Washington, D.C., 1982.

Baccalaureate Origins of Doctorate Recipients From U.S. Universities, 1977–80, Doctorate Records File, National Research Council, Washington, D.C., 1982.

Earned Degrees Conferred, Institutional Data, U.S. Department of Health, Education and Welfare, National Center for Education Statistics, U.S. Government Printing Office, Washington, D.C., for 1970, 1971, 1972, 1973, 1974, 1975, 1976.

Dr. JORDAN. This study compares the science Ph. D. productivity of the 25 GLCA and ACM colleges with the science Ph. D. productivity of 10 major universities and 8 technical schools. We have, according to this study, higher Ph. D. productivity rates in some science fields than do the 10 major universities with which we are compared. When one compares Ph. D.'s earned by graduates with baccalaureates granted in those fields, the GLCA and ACM colleges are more productive than either the major universities or the technical schools. Clearly, quality liberal arts colleges contribute importantly to the preparation of American scientists.

It is appropriate for several reasons for the National Science Foundation to support quality science research in undergraduate liberal arts colleges of quality. First, such research, although it is not large scale when appraised by appropriate peer review at appropriate quality standards is significant and worthwhile as research.

Second, first-rate faculty research at liberal arts colleges provides the occasion, as I have noted, for student scientists to do science as a means to recruit the best science students in those colleges into scientific careers.

And, third, there is a real need in our colleges for research support for our science faculty.

We do not have the internal resources to sustain their research, and we are falling woefully behind in scientific instrumentation. We need the assistance of NSF programs targeted to our kinds of colleges to sustain and improve upon our important historic role as preparers of future scientists.

As I noted in my written testimony, NSF's new Director, Dr. Edward A. Knapp testified in the NSF budget summary for Congress for fiscal year 1984 to the importance of undergraduate colleges in producing scientists. Dr. Knapp proposed a new program in undergraduate college research support to encourage scientifically meritorious research by undergraduate college faculty with undergraduate student research participation.

We enthusiastically support his initiative except that we recommend a major thrust for research done on small college campuses, not exclusively in cooperation with large universities, although, of course, that interinstitutional relationship can be valuable. And we note that the budget request level of $3 million is inadequate.

We urge that such quality research by liberal arts college faculty members be supported through allocation of a specific portion of the NSF research and related activities budget. We recommend an allocation of 5 percent. We also recommend that, as a part of that undergraduate college research allocation, funds be provided for 2- and 4-year college research instrumentation in the amount of 10 percent of the total NSF instrumentation budget. The program is a well-run and valuable source of equipment to our faculty researchers. The limitation on grants should be increased from $35,000 to $50,000 to recognize rising costs.

In my written testimony, I detailed other needs of quality liberal arts colleges for science education. Recognizing the interest and activity in the area of science education in both Houses of the Congress, I would urge that if this subcommittee considers science education policy and appropriations in the future, you consider the four areas of need that I have described in my testimony. These are: Undergraduate research, instructional equipment, faculty development, and curriculum development.

Thank you, very much.

Senator GARN. Thank you, Doctor.

I certainly wish to agree with you that top-quality research can be done at smaller colleges. I don't think there is any doubt about that, and your comments about the large university bias, I do think that is inherent in a peer review process, as well. So you can be assured that I will continue to press NSF to award grants on the basis of merit and without regard to the size of the institution.

I have also talked to Dr. Knapp about increasing the number of grants rather than increasing the size of the grants.

We had many discussions in the subcommittee about that. It seems that sometimes the level of the grants go up and everything is nicer for that grantee, but it doesn't produce any better research. I have used the example that while it is nice to have beautiful facilities and all of that including the large labs, these were not the key to the development of the artificial heart at the University of Utah. They worked in some sparce facilities for a number of years before they finally got some decent facilities. I think you would have to agree that a lot of things wouldn't be invented if people didn't have that seed to start, regardless of having all the plush surroundings that go with it.

I get a lot of arguments on that on the other side about, "Well, we need fewer and bigger grants; we need to be more selective." But that whole process has bothered me somewhat and that selection process has just indicated that all of the top research is going to come out of certain segments, and that has not been the case. Some of the ones they have turned down might have been very, very promising. So I will continue to push on that.

Dr. JORDAN. Thank you, very much.

Senator GARN. Thank you.

[The statement follows:]

STATEMENT OF DR. PHILIP H. JORDAN, JR., PRESIDENT, KENYON COLLEGE, ON BEHALF OF THE GREAT LAKES COLLEGES ASSOCIATION, THE ASSOCIATED COLLEGES OF THE MIDWEST, AND REED COLLEGE

Mr. Chairman:

I am pleased to have been invited to appear before this Subcommittee as you consider the fiscal year 1984 appropriation for the National Science Foundation. In appearing here today, I am representing the twenty-five undergraduate liberal arts colleges which are members of the Great Lakes Colleges Association and the Associated Colleges of the Midwest;* Reed College in Oregon also joins in supporting our position. These institutions are proud of their past record and their continuing role in science education and in producing research scientists and teachers of science for our nation.

It is extremely important that the process of science education and of the education of scientists be seen as continuous, beginning in the schools and concluding in graduate study. The undergraduate college years represent a crucial phase in that process, when qualified students consider and choose careers in science. In the Federal concerns about scientific literacy for our population and about the production of trained scientific manpower, the role of quality undergraduate colleges needs to be kept clearly in mind and to be supported in direct and appropriate ways.

The contributions to American science by colleges like those I represent in terms of the high quality of their graduates may be even more important than their demonstrated productivity in numbers. At the undergraduate level the apprentice-mentor relationship, which is the best way for young scientists to learn about science, is most likely to occur at the undergraduate college. The education of scientists in liberal arts colleges is further enhanced as they learn their science within the context of the broader range of the liberal arts. Small liberal arts colleges number distinguished men and women of science among their alumni, and the stream of graduates who become productive research scientists has flowed steadily over the years.

At my own college, Kenyon College, for example, we are proud of graduates from the past sixty years who have achieved eminence in science. William W. Greulich '26, now retired as professor of Anatomy at Stanford University, studied survivors of Hiroshima and Nagasaki, served as science advisor to the U.S. High Commission for Germany and contributed to the growth and development program of the National Institute of Child Health and Human Development. At Clark University, Rudolph F. Nunnemacher '34 conducts research on the autonomic nervous system of vertebrates by examining specialized nerve fibers through electron microscopy and thereby advances basic zoological knowledge. Carl Djerassi '42, professor of chemistry at Stanford, has conducted pioneer research which resulted in synthesis of the first oral contraceptive, and he founded the Zoecon Corporation to develop new methods for insect control and established research centers in Africa, Brazil and Mexico.

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* The members of the Great Lakes Colleges Association are Albion College, Antioch University, Denison University, Earlham College, Hope College, Kalamazoo College, Kenyon College, Oberlin College, Ohio Wesleyan University, Wabash College and The College of Wooster. The Associated Colleges of the Midwest are Beloit College, Carleton College, Coe College, The Colorado College, Cornell College, Grinnell College, Knox College, Lake Forest College, Lawrence University, Macalester College, Monmouth College, Ripon College, and St. Olaf College.

Two members of the class of 1952, Frederick C. Neidhardt and Martin J. Nemer, have become research biochemists and made important contributions to our understanding of cell and molecular biology. At Cornell Medical School, Stephen S. Wachtel '59 has broken new ground in the field of genetics of sex determination through his research on a gene on the male chromosome. And at the Massachusetts Institute of Technology, Harvey R. Lodish of '62 has done groundbreaking work in recombinant DNA research and advanced the frontiers of molecular and cell biology. These are some prominent examples of what one small college can contribute to the advance of science.

To continue their important role in the education of scientists liberal arts colleges need support that will strengthen their faculty as teachers/researchers and maintain the vitality of their academic programs in science.

They need opportunities for research by their faculty members. The faculty members at quality undergraduate colleges can and do carry on research of the highest quality, and their continued vitality as researchers is directly connected to their effectiveness as teachers of science. This point must be made in the strongest terms. It is dedication to teaching and to research, which not only contributes to the advancement of science but also to the vitalization of teaching, that makes the scientists at a liberal arts college quite different from most of their colleagues at research universities. Such a teacher/scholar can do first rate research and do it in most cases on site at the college. But the type of problem being investigated, the length of the project and the procedures employed may be, often must be, different from those at research universities. To support research by liberal arts teachers and to recognize its considerable importance require a type of program support appropriate to that enterprise.

We believe that research by these faculty members should be supported through a specific portion, say five percent, of the Research and Related Activities budget. Frankly, there has been a perception on the part of many fine scientists teaching at undergraduate colleges that there has been some prejudice in the review of their research proposals at the National Science Foundation. Most of NSF's dealings are, quite appropriately, with the major research universities. Those who review proposals do not always seem to understand that top-quality research can be and is done by faculty at colleges where the major emphasis is on teaching. Indeed, it is carried on as an extension of teaching, involving the most promising undergraduates, and this is one of the reasons that the support of research by faculty at undergraduate teaching colleges has a double value: the quality of the research itself and the contribution it makes to the education of some of our best future scientists. While we would continue to insist that only the best proposals for research as determined by peer review be supported, we believe that the assurance of a proportionate share of the budget would provide an appropriate standard to be certain that proposals from undergraduate institutions are not neglected.

Faculty at predominantly teaching institutions need periodic opportunities for professional renewal. They need to work with and consult with scientists at larger laboratories as a supplement to the research activity which they can carry on on their own campuses. Faculty at undergraduate colleges are called upon to teach a broader range of courses than are colleagues at larger and more specialized institutions, and they have some special needs in keeping up with a wider field of knowledge. The Science Faculty Fellowships of the past fulfilled this need by providing faculty, particularly those who do not teach in a research institution, support to spend time in industrial or academic research settings on a project of their own design. The Small College Faculty Opportunities program, which NSF proposes to absorb in the new Undergraduate College Research Support program, presently meets a part of this need but is underfunded at about $1.0 million.

There are also important instrumentation needs for both research and instruction in undergraduate colleges. Some equipment is in the natural course of things acquired initially for research purposes and then used for instruction. But there is also a need in many fields for state-of-the-art equipment which will be used primarily for instruction. That need is not now being adequately met from any source.

In providing federal assistance in the purchase of larger scale and expensive equipment for use in instruction, it may be useful to require the institution to share significantly in the cost of that equipment. Total needs in scientific instructional equipment are great and some form of rationing for scarce resources is required. When the institution bears a significant part of the cost, this insures that the equipment will be placed where it is going to be used.

The Two-and Four-Year College Research Instrumentation program has been in recent years a well-administered and valuable source of equipment to researchers in our institutions. The limitation on these grants of $35,000 we believe should be increased to account for higher equipment costs to $50,000. In view of NSF's sound arguments on the needs for instrumentation, which apply to research in all institutions, we believe that ten percent of the total NSF instrumentation budget, an amount which would fall within the Research and Related Activities item mentioned earlier, is a reasonable amount for grants to these undergraduate institutions.

There is one type of scientific equipment which is clearly in a category to itself, and that is computing equipment. It differs both in its scale and in its very broad applications throughout the work of a college or university. It is important that support for the acquisition of computing equipment not be penalized precisely because it is so broadly useful across the range of disciplines. Where such support is organized primarily by individual disciplines, this can be the case. There is a need for some support categories that will respond to major equipment needs, particularly in computing, which cut across most disciplines.

There is a need for the periodic review and improvement of science instruction. The National Science Foundation in the past has provided useful support for this need to keep teaching current with the ever-changing state of scientific knowledge. Such improvement on every level of science education is a high priority now.

As undergraduate liberal arts colleges, we are particularly aware that there are important projects which are comprehensive, bridging the sciences, the social sciences and the humanities. The divisions of responsibility in the federal government hinder appropriate assistance to colleges and universities with valuable projects with cross disciplinary lines. It would be very desirable to have an encouragement of regular collaboration between NSF and the National Endowment for the Humanities on projects of high quality which do bridge disciplines. This is particularly applicable in our concerns about general technological literacy. Such programs contribute not only to the training of manpower for science and technical components for our society but also to the transmittal of the broad understanding of science which is increasingly needed for effective democratic government in a technological age.

We have appreciated NSF Director Knapp's recognition of the important role of undergraduate colleges. As he put it in this year's NSF budget summary:

> Another crucial part of the link in the educational base which provides the Nation's future engineers and scientists is the small, predominantly undergraduate college. A significant proportion of those awarded the Ph.D. in science, mathematics and engineering receive their baccalaureate at these institutions.

He goes on to note that "it is important that faculty of these institutions receive support and encouragement for maintaining their research capabilities." For this purpose, the National Science Foundation is proposing this year to spend $3.0 million on a "new" program under the title "Undergraduate College Research Support." We strongly urge that it be very clear that research supported under this program shall be carried out on the undergraduate campus whenever appropriate, as it very often is. In some cases undergraduate faculty may need the resources of a larger laboratory at a major research university or an independent laboratory. However, whenever the research can be carried out on the undergraduate campus, there is the double advantage of more sustained involvement by the faculty member doing the research and also the very important involvement of the best undergraduate students in assisting with that research.

The NSF system of peer review, utilizing faculty from undergraduate colleges, will be an important factor in determining these awards. Such reviews have worked well in the present Two- and Four-Year College Research Instrumentation program and should function as well in the Small College Faculty Opportunity type grants.

We would also suggest that, although there seems to be no line item for this new program, there does need to be specific statutory language directing this effort and identifying its level of support. The budget request level of $3.0 million is quite inadequate. We greatly appreciate Dr. Knapp's understanding of the importance of undergraduate institutions, but we are painfully aware that this is a rather new line from the National Science Foundation.

Despite the specific language of the statute which created the Foundation, the plain fact is that the National Science Foundation has also given clearly inadequate support to its responsibilities for science education and for the education of scientists for the future. We are also aware that there is no sharp distinction to be made between research and education in the sciences; they support each other and often go on simultaneously. We believe that direct statutory language is needed to remind the National Science Foundation that its education responsibilities are important and must have explicit support.

We would like to comment on one other element of the NSF budget which has been proposed by the Administration. That is the intention to fund Pre-College Teacher Improvement in Science and Mathematics, carried out through in-service teacher institutes. In addressing the issues of education in science and mathematics at the elementary and secondary level, which I realize has been a special concern of Congress this year, we would emphasize both the desirability and the necessity for the direct involvement of the National Science Founation in teacher training and curriculum development for the elementary and secondary schools. Our needs in science education are not only needs in terms of numbers but also in terms of the quality of education. Quality science education requires the direct involvement of scientists. We believe it is most appropriate that the lead in the specialized training of teachers for their responsibilities in teaching science should come at the federal level from the National Science Foundation.

Following this same conviction on the role of the National Science Foundation, we support the concern within Congress to deal with the present crisis in mathematics and science education on all levels and we especially endorse a National Science Foundation role in developing materials and model teacher institutes. The National Science Foundation in the past supported teacher institutes which did much to improve science education, involving scientists as well as classroom teachers. This combination of content experts and teaching experts is vital if we are to improve the quality of science education. We urge that when this Subcommittee reviews appropriations, it will recognize this need for expertise which NSF is able to provide.

We appreciate this opportunity to appear before the Committee and to offer these particular views from the perspective of the quality of undergraduate college.

STATEMENT OF MICHAËL S. PALLAK, PH. D., EXECUTIVE OFFICER, AMERICAN PSYCHOLOGICAL ASSOCIATION

Senator GARN. Next we have Dr. Michael S. Pallak, executive officer of the American Psychological Association, on behalf of the Association for the Advancement of Psychology.

Dr. PALLAK. Senator Garn, it is a pleasure to be here.

I am Dr. Michael Pallak. I am the executive officer for the APA. I represent some 65,000 psychologists who are members of our association and our sister organization, the Association for the Advancement of Psychology. To provide a little bit of a setting, in 1970, 10.3 percent of all science doctorates in this country were doctorates in the field of psychology.

I do appreciate the opportunity to testify before this subcommittee on the fiscal year 1984 NSF budget. A number of witnesses have testified about the important role of NSF in this country's basic research endeavors.

Today, I would like to focus briefly on a special concern of psychologists as members of the behaviorial and social science research community; that is, the proposed fiscal year 1984 level of funding for the NSF's behaviorial and social science programs.

There is still a very great distance to go to compensate for the drastic reductions that occurred in the NSF behavioral and research budget since 1980.

We are concerned that without specific congressional guidelines, the administration's policy of disparite low funding for the behavorial and social sciences will continue unchallenged and unabated.

We endorse the overall 8-percent increase for NSF that is contained in the administration's fiscal year 1984 budget request. This increase is a strong signal and a gratifying signal that the administration recognizes the value of basic research and shares in the scientific community's confidence that strong basic research activities are a key element in maintaining our status as world leaders in science and technology.

The proposed fiscal year 1984 budget for NSF, however, once again seems to establish a hierarchy among the sciences with behaviorial and social science research receiving relatively less than an equitable share of the proposed increase for the agency's overall research and related activities.

This is especially critical, because these areas of research have already borne more than their proportionate share of budget reductions since fiscal year 1980, the last strong year of NSF funding for the behavorial and social sciences.

As I have indicated in a more extensive written statement, several of the behaviorial science research programs would receive only very small increases.

In many instances, the administration's proposals would have the effect of further reducing NSF support for these sciences because the budget increases fail to keep pace even with inflation in these particular areas.

For the sake of comparison, it should be noted that several other areas of NSF research and related activities budget are targeted for increases that are much larger than the 18-percent increase proposed for NSF as a whole.

On May 12, the House of Representatives approved a fiscal year 1984 authorization for NSF that contains a $15 million increase for the behavioral, social, and information sciences. Now, this was accomplished by redistributing funds within the NSF budget rather than by adding to it. Although $15 million in one sense is a great deal of money, in another sense, it is a relatively small amount compared to other parts of the NSF budget or the Federal Government. These funds will make an enormous difference in the vitality of the behavioral and social science research programs sponsored by NSF.

The House action also reaffirms the value of basic research in these areas as well as other areas of science as the House has reaffirmed every year for the last 2 years.

We urge the Senate Appropriate Subcommittee on HUD-Independent Agencies to approve full funding of this authorization because of the need to maintain NSF's programs in the behavioral and social sciences and also to reject the attempt to establish a kind of hierarchy among the sciences.

The administration's fiscal year 1984 distribution conveys a message that research in the behavorial and social sciences is somehow of less importance to the national interest. This message contradicts the numerous expressions of very strong bipartisan congressional support for this research and these research programs that have appeared in committee reports and floor statements in the past several years.

We think it also overlooks the numerous contributions that have been made by these sciences to our contemporary society.

I draw your attention in my written statement to several of these kinds of contributions that I have tried to outline in some detail made by the behavioral and social sciences to the common welfare of our society.

This is an additional concern, and very briefly I would like to touch on it. That has to echo some previous witnesses who have been concerned with the Nation's science education activities, specifically the role of educational research in achieving this improvement.

As Congress and the administration become increasingly favorable to supporting the development of fine technology, it is important that adequate educational underpinnings be put in place so that future producers and consumers of technology and science are adequately prepared. Our concern is that there should be support for research in the best ways in which science can be taught and what we can do to make sure that our kids learn science as easily and as effectively as possible.

One example of an appropriate means of support for this objective appears in H.R. 1310, the Emergency Math and Science Education Act. As passed by the House, this bill contains, I believe, $5 million for strengthening educational research and development. It is an important first step, and we support the inclusion of this or similar provisions in whatever final form emerges from the legislative process for science education. It is a necessary element in increasing the number of scientists and science teachers and improving their training and improving public understanding and appreciation for science.

I think a society that does not replenish its intellectual capital in a number of dimensions, whether it is in education, whether it is the contribution of behavioral social sciences, whether it is the contribution of basic sciences; et cetera, a society that does not provide for future scientists in its citizenry that is informed and literate about the scientific processes that is, after all, a basic element of American society is, indeed, doomed to something less than what we all would like to see the society achieve.

Senator, I would be very pleased to answer your questions.

Senator GARN. Thank you, Doctor.

I certainly can understand your concern about the level of funding for the behavioral and social sciences, and you can be assured that the subcommittee will certainly take a look at your recommendations.

But I take some exception to your suggestion that we, and I quote, "Reject the administration's distribution of funds because it represents an attempt to designate particular areas of research as being of lower priority for support."

First of all, I asked Dr. Knapp about this area, and he told me that the decisions that were made by NSF professionals and science advisors, not on the basis of any administration policy, but it was an internal decision. Second, when you have limited funds I think there has to be some attempt to prioritize, and you or I may not agree with a particular priority listing, but I do think it's important to attempt to do that.

I'm not qualified, obviously, to make those decisions, but I do have to rely on the advice of professionals who work in those fields. But I do thank you very much for your testimony.

Dr. PALLAK. Senator, one closing comment. I could not emphasize more with the need to establish priorities. I think those priorities should be made within NSF and not by OMB as they were made 2 years ago by Mr. Stockman when he said the behavioral and social sciences have not established any contributions to society. That was false, and we have been trying to do our part in terms of providing information to the agency, and certainly to the administration, with whom we have a number of very good working relationships.

In fact, we appreciate the administration's continuing emphasis on science and education.

Thank you very much.

Senator GARN. You have got to remember that Mr. Stockman in his first reincarnation knew everything about everything [laughter], housing, NASA; you name it.

Dr. PALLAK. Senator, your reputation for a sense of humor is, indeed, well earned. Thank you very much.

[The statement follows:]

STATEMENT OF MICHAEL S. PALLAK, PH. D., EXECUTIVE OFFICER, AMERICAN PSYCHOLOGICAL ASSOCIATION, ON BEHALF OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION AND THE ASSOCIATION FOR THE ADVANCEMENT OF PSYCHOLOGY

Summary of Recommendations

The American Psychological Association and the Association for the Advancement of Psychology make the following recommendations regarding the National Science Foundation Budget for FY 84:

- To support a Administration's proposed 18 percent increase for NSF's FY 84 research activities;
- To support a redistribution within the FY 84 NSF budget — such as the proposal approved by the House of Representatives -- so that the NSF behavioral and social science research programs will be funded at a more equitable level; and
- To support provisions, such as those in H.R. 1310, which authorize NSF to conduct important science education-related activities, particularly the $5 million program (Sec. 105, Part B), that would strengthen educational research and development.

I am Michael Pallak, Executive Officer of the American Psychological Association (APA). I am here representing the over 65,000 psychologists who are members of the APA and of our sister organization, the Association for the Advancement of Psychology. I appreciate the opportunity to testify before this Subcommittee on the FY 84 National Science Foundation (NSF) budget.

Other witnesses have testified about the important and central role of NSF in this country's basic research endeavors. In addition, there are two main issues of special concern to psychologists as members of the behavioral and social science research community. One is the proposed FY 84 level of funding for NSF's behavioral and social science programs. The second concern is the need to improve the quality of this nation's science education activities, specifically the role of educational research in achieving this improvement.

There is still a long way to go to compensate for the drastic reductions that have occurred in NSF's behavioral and social science research programs since FY 1980. We are concerned that, without specific Congressional guidelines, the Administration's policy of disparate funding for the behavioral and social sciences will continue unchallenged and unabated. This is of particular concern during the current budget process because of high-level personnel changes at NSF. Specifically, the Assistant NSF Director for Biological, Behavioral and Social Sciences (BBS) has been asked to resign, along with other agency officials. Whether or not this occurred for political reasons, the absence of a director is likely to increase the funding vunerability of the behavioral and social sciences because of the important role such an individual plays in shaping budget requests and in making final budgetary allocations.

Your colleagues on the authorizing committee for NSF recently sought, and were given, assurances by NSF's new Director Edward Knapp that political tests would not be applied either to candidates for the high-level posts within the agency, or to appointees on science advisory panels.

We bring this to the Subcommittee's attention and strongly urge you to join in the efforts to prevent the politicization of research programs of NSF.

Turning now to the budget at hand:

The APA endorses the 18 percent increase for NSF that is contained in the Administration's FY 84 budget request. However, we are urging this Subcommittee and other members of Congress to reject the Administration's distribution of funds within the request because it represents an attempt to designate particular areas of research as being of lower priority for support.

The 18 percent increase targeted for the Foundation is a gratifying signal that the Administration recognizes the value of basic research and shares in the scientific community's confidence that strong basic research activities are a key element in maintaining our status as world leaders in science and technology.

Just as the proposed 18 percent increase for NSF as a whole is a signal, so may the proposed budget for behavioral and social science research be interpreted in terms of the Administration's intent. But it is a substantially less positive signal that is being transmitted. The proposed FY 84 budget for NSF once again is an attempt to establish a hierarchy among the sciences, with behavioral and social science research receiving far less than an equitable share of the proposed increase for the agency's overall Research and Related Activities budget. This is a particularly critical issue because these areas of research have already borne more than their share of budget reductions since FY 80, the last strong year of NSF funding in these sciences.

We estimate that an increase of 32.2 percent (or $10.9 million) over the FY 83 budget is required to restore the Behavioral and Neural Sciences division to a level of funding comparable to FY 80.* But this Division is slated for an increase of only 12.2 percent (from $33.8 million in FY 83 to $37.9 million in FY 84). Within this Division, there is an even more disturbing proposal to limit the Psychobiology program to an increase of only 2.7 percent (from $3.7 million in FY 83 to $3.8 million in FY 84). Yet we estimate that an increase of 48 percent (or $1 million) is needed to restore the program budget to a level comparable to FY 80. Similarly, the Social and Developmental Psychology program would change only 4.7 percent (from $2.1 million in FY 83 to $2.2 million in FY 84) if the Administration's budget is adopted. But because of recent budget reductions, a 90 percent increase (or $1.9 million) would be required to restore this program's budget to its FY 80 strength.

Instead of restoring these programs, the Administration's proposals would have the effect of further reducing NSF support for the behavioral and social sciences because in some instances the increases fall below the rate of inflation. Only budget proposals for the Neurobiology program and the Social and Economic Sciences Division approach parity with the Foundation's other areas of research. Neurobiology is target for a 16.3 percent increase (from $11.2 million in FY 83 to $13.0 million in FY 84) and Social and Economic Sciences are targeted for a 17.7 percent increase (from $19.8 million in FY 83 to $23.3 million in FY 84).

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*This, as well as subsequent estimates, is based on a 5 percent per year inflation factor.

For the sake of comparison, it should be noted that several other areas of the NSF Research and Related Activities budget are targeted for increases that are disproportionately higher than the 18 percent increase proposed for NSF as a whole. For example, the Mathematics and Physical Sciences program is slated for a 21.5 percent increase; and the Antarctic program would receive a 22.7 percent increase.

On May 12, the House of Representatives approved an FY 84 authorization for NSF that contains a $15 million increase for the behavioral, social and information sciences. This was accomplished by redistributing funds within the NSF budget rather than by adding to it. Although $15 million is a relatively small amount compared to other parts of the NSF budget, these funds will make an enormous difference in the vitality of NSF's behavioral and social science programs. This action also reaffirms the value of basic research in these areas as well as the other areas of science.

We urge the Senate Appropriations Subcommittee on HUD-Independent Agencies to approve full funding of this authorization because of the need to maintain NSF's programs in the behavioral and social sciences and also to reject the attempt to establish a hierarchy among the sciences.

It is one thing to establish priorities within a particular area of research. But the Administration's budget proposes to establish priorities among the sciences, thereby creating a partisan mission for NSF. The scientific community as a whole has consistently opposed efforts to politicize research support in any area of science. One example is the following excerpt from the National Science Board's "Statement on Social and Behavioral Sciences":

> The National Science Board believes that support for the social and behavioral sciences, as with all sciences, should continue to be based on criteria of research quality as judged by rigorous critical standards. The Board believes it is imperative to have resources adequate to mount a balanced program. Such a program must include maintenance of large data bases, improvement and strengthening of research methodologies, and provision of opportunity for innovative investigator initiated projects. The long-range interests of the country require a continuing base of adequate support of the social and behavioral sciences so that the research base and intellectual vitality the United States has established in these fields can be maintained and increased.

The Administration's proposed FY 84 distribution of funds also conveys a message that research in these areas is of less importance to the national interest. This message contradicts the numerous expressions of bi-partisan congressional support for behavioral and social science research that have appeared in committee report language and floor statements in the past several years. It also overlooks the numerous breakthroughs that have been made in these sciences. Following are just a few examples of the contributions that have resulted from work in the behavioral and social sciences:

- Consider the problem of energy use. The development of energy sources and the refinement of techniques of production of energy are clearly problems for the engineering and physical sciences. However, the patterns of use of energy are almost entirely a question of human attitudes and behavior. Here conservation rests on such simple behaviors as turning a switch on or off, monitoring one's own behaviors (as in the use of dishwashers or driving habits) turning up the thermostat in the summer and down in the winter, and acceptance and/or purchase of alternative modes of supply. The behaviors and attitudes involved are simple and relevant questions easily researchable, and all could have an important impact on the overall use of energy and the patterns of use. Social psychologists have conducted numerous field experiments showing the effectiveness of various behavioral techniques for promoting energy conservation. Mass media communications encouraging energy conservation are based upon principles of communication tested and demonstrated in both laboratory and natural settings for over 35 years.

- The management structure and processes of American industry are often based on straight-forward behavioral science research. This research includes studies of the relationship of morale and employee satisfaction to productivity, the effects of employee participation in decision-making on productivity, the nature of resistance to change of management practices, employee profit-sharing plans, and the relationship of styles of leadership to group productivity. Most such studies were field experiments conducted by industrial-organizational psychologists and sociologists, in cooperation with the firms' management and workers.

- A major assumption on the part of the business community, government, and the military for decades has been that an organizations' overall efficiency and productivity can be greatly afected by the appropriate allocation of people to jobs. A major subfield of psychology is concerned with just these issues and has endeavored to construct valid and reliable tests and other selection and classification procedures to improve this process. Despite improvements in these techniques over the years, some psychologists believe that an important reason for the slowing down of U.S. productivity growth is reduced efficiency in allocating people to jobs, stemming in large part from American industry's reduced use of selection and classification tests in making hiring decisions over the past two decades. For computer programmers alone, psychologists have calculated that nationwide use of a particular valid test (the Programmer Aptitude Test) would result in "hundreds of millions of dollars in increased productivity" to the national economy. Their calculations further show that if use of appropriate tests were extended across other occupations, the net effect would be an increase of $100 billion in the U.S. Gross National Product.

- It is generally unknown the degree to which basic social psychological research is currently used in industry, social institutions, and the management sciences. For example, the notion of personnel selection and assessment is integral to the way we conduct business; both the general approach and the details of such procedures re dependent upon basic research that goes back to the selection of Army officers in World War I, personality testing developed in the Veterans Administration Hospitals, and decades of achievement and ability testing in American education.

- There is currently great interest within industry in the use of robotics for reasons of quality control as well as labor costs. Human factors researchers are currently involved in trying to anticipate and assess the organizational changes that will result from increased use of robotics. A major contribution to the design of robotics has been the work of psychologists and operations researchers on artificial intelligence, growing out of experimental work by cognitive psychologists.

- As a negative example, human factors researchers and engineers have not been used widely in the nuclear power industry. The accident at Three Mile Island demonstrates that social and behavioral elements can be as important as physical and technological factors. The Kemeny Commission investigating the accident concluded that it was primarily "people-related problems and not equipment problems" that brought the nation so close to a major tragedy. More recently the Nuclear Regulatory Commission has shown considerably more interest in such approaches, and has enlisted the assistance of the Human Factors Society to aid in the upgrading of these elements of nuclear plant design and operation. Human factors engineering draws on decades of research on basic human abilities and characteristics, and how to adapt physical devices to maximize human performance.

- In the area of safety in the workplace, industrial accidents are the fourth leading cause of death in the United States (following heart disease, cancer, and strokes). "Accidents cost billions of dollars annually for treatment of over 10 million injuries, lost occupational time, insurance administration, and other related costs" (Sulzer-Azaroff and De Santamaria, 1980). Social and behavioral scientists can play a major role in improving the safety of work settings not only through the human factors design of equipment, but also through the introduction of social or behavioral techniques designed to produce safer conditions. Psychologists have demonstrated, by means of field experiments, that a program of feedback to both supervisors and workers regarding hazardous conditions in the plant can be effective in lowering the frequencies of specific hazards, in one study by as much as 60 percent. In some cases studied, this program also resulted in increases in meetings dealing with safety-related issues, greater worker suggestions for safe practices, and in one department an increase in production.

Science Education

As I mentioned earlier, APA shares the concern that improvement is needed in this nation's science education activities. We believe this is necessary for the U.S. to remain competitive with other countries in industries and other areas where innovation is needed. Another concern is that economic productivity will continue to falter without better science education. Equally important is the need to improve this nation's scientific capacity for understanding and solving the problems that beset humans in the areas of health, the environment, and society. Finally, there is a need to improve public literacy in the areas of science and technology.

Each of these points underscores the need for us to adjust to the increasing presence of "high technology" in our economy and in our daily lives. As the Administration becomes increasingly favorable to activities that support the development of such technology, it is important that adequate educational underpinnings be put in place so that future producers and consumers of high technology will be adequately prepared. Our concern is that there be adequate research on the best ways in which science can be taught and learned.

We believe that Section 105, Part B of H.R. 1310, the Emergency Mathematics and Science Education Act, represents an important first step in accomplishing this educational research objective. Five million dollars of H.R. 1310's authorization has been targeted in this section for "Strengthening Educational Research and Development." We support the inclusion of this provision in whatever final form the legislation for science education takes, as a necessary element in increasing the number of scientists, improving the quality of their training, and in improving public understanding and literacy in science.

Conclusion

Briefly, on behalf of the more than 65,000 members of the APA, I am asking the following of this Subcommittee:

- To support the Administration's proposed 18 percent increase for NSF's FY 84 research activities;
- To support a redistribution within the FY 84 NSF budget -- such as the proposal approved by the House of Representatives -- so that the NSF behavioral and social science research programs will be funded at a more equitable level; and
- To support provisions such as those in H.R. 1310 which authorize NSF to conduct important science education-related activities, particularly the $5 million program (Sec. 105, Part B), that would strengthen educational research and development.

It has been a pleasure to testify before this Subcommittee on these important issues. I would be happy to provide additional information or answer any questions for the Subcommittee.

STATEMENT OF DR. ROBERT E. YAGER, PRESIDENT, NATIONAL SCIENCE TEACHERS ASSOCIATION

ACCOMPANIED BY BILL G. ALDRIDGE, EXECUTIVE DIRECTOR, NATIONAL SCIENCE TEACHERS ASSOCIATION

Senator GARN. Next Dr. Robert Yager, president, and Bill Aldridge, executive director, of the National Science Teachers Association.

Dr. Yager?

Dr. YAGER. Senator Garn, thank you very much. We are delighted to be here and delighted to have been asked to offer testimony to the subcommittee on behalf of the science education part of the NSF budget.

We are here to proclaim that we feel that there is a great deal of consensus within the science education community concerning needs and directions. We feel that within science education is defined as that discipline concerned with the interface between science and technology, that discipline concerned with interpreting scientific advances and technology for all of society, as well as trying to define better society in its influences upon the scientific enterprise itself.

We feel that there have been many failures within the efforts of the past, not because of funding or lack of funding, but for lack of attention to the basic enterprise of science itself, the experimentation that is so vital in a field like science education.

We feel that there is evidence that the failures of the schools are very real, in terms of producing a citizenry that is able to act in the kind of society in which we find ourselves today, one that is governed largely by matters of science and technology. A recent report would suggest that as many as 90 percent of the adult population in our society is functionally illiterate in matters of science and technology, and we feel that this is a serious problem needing immediate national attention.

We find that the Jeffersonian ideal of an informed citizenry able to act intellectually upon the matters of our time has not been achieved with our schools, and we feel that the support of science education within the NSF budget is an important factor in this regard.

We feel that in terms of a scientifically literate society it means, that by the study just cited, a population that has a certain interest. There is all kinds of evidence to suggest that there is interest in matters of science and technology but that not many people are able or capable of doing much to further that particular interest. In the case of knowledge, a second ingredient of scientific literary, we find even more problems. When we look at some of the simplest concepts that are approached, sometimes in the elementary school, we find that the number of high school graduates capable of dealing with such concepts, one, for example, like molecules, only 25 percent of the high school graduates have a working idea of that particular concept, something that is pretty basic to fields of the physical sciences, particularly.

Another aspect, and the third and important one, for scientific literacy is a person who can do something to further both interest and knowledge, and we find there that the schools are woefully lacking in the ability to help people use information and do something about it. We are concerned that as the crisis in science education has captured the imagination and the attention of the American public, and certainly, people in leadership roles, that too often the crisis is viewed in what we feel are simplistic terms, looking at shortages only of people that are involved in the teaching process, looking at manpower needs, and looking upon comparisons with other nations.

We are anxious to see the crisis broadened, the definition of the crisis, and some of the actions that are needed to resolve these very, very serious problems. We feel, as is written, and is as included in our written testimony, that this is going to take a national leadership and a look at the thing from a national perspective.

I would like to—I am sure that you have had a chance to look at our written testimony and notice that we are anxious to see specified in the NSF science education budget support in 10 different areas. And I might say that we are very pleased with your support for certain of these. There have been things that have been put in place already which would make some of these areas realized, but I would like to elaborate briefly upon these 10 areas. But we think that it is important, we feel that the past criticism of the science education having been splintered into too many small programs is not justified, and it is pointed out in the testimony that there are many other branches within the Foundation where there are even smaller programs and longer programs for less money.

First of all, we feel that it is important that there is a specific amount in the science education budget for evaluation and assessment. We feel that it is obvious to us that one of the reasons we have the current crisis is that we have not had enough information, we have no mechanism for collecting information about manpower needs in the schools and other aspects of the science education discipline.

A second area where we feel that funding is important is in the area of coordination and communication. We feel that a joint council, that a national sort of committee that is constantly thinking ahead, think tanking, planning, and coordinating is vital, and that a national laboratory, much as we have in terms of the various science areas, and Argonne National Laboratory, is an important move for the discipline of science education, and we are suggesting that $3 million be set aside for this kind of a national leadership function.

A third area is support for programs of critically needed math, science, and engineering personnel. This certainly would include teachers, and we are delighted with the various kinds of recognition, for excellence awards that are being conceived and are being planned now, and we are very happy to be a part of those.

But we feel that there is a continuing need for a national leadership for the support of in-service teachers, particularly, that are there in the schools, many of them now being called in from disciplines and areas of preparation other than science.

A fourth area that we feel is important is the program to link math, science, and engineering education to basic research. We never want to lose sight of the fact that science education is dependent upon and related to the various research enterprises and that this kind of participation where students in the precollege level, for undergraduates, and practicing teachers is extremely vital.

A fifth area that we feel is important is resource research, development, and improvement for precollege, and I would certainly agree with the preceding speaker that there have been many discoveries that have implications and, indeed, should be utilized in terms of science education today. But there has been no mechanism, either for discovering more or for putting the discoveries to use in the Nation's schools.

A sixth area deals with resource research, government, and improvement of undergraduate math, science, and engineering education, a sizable amount of money that we are recommending be appropriated because we feel that many of the problems at the precollege level can be traced to the problems of science education at the undergraduate level, that there are serious improvements that are needed, and that there are no funds for that in terms of the program as conceived now within the science education program.

A seventh area that we feel is important, math, science, and engineering education is support of research and economic recovery. This would largely be support for community college and technical schools where we could have some improved efforts for preparing the technicians that are so needed within our society.

And the eighth area deals with public awareness and youth motivation programs. Again, some of the most successful programs we are dealing with is outstanding youth and those designed to help with the public understanding of science and technology and the way that it works within our society. We feel that that is an extremely important problem and program that deserves funding for its own merits and by title.

A ninth area deals with instructional learning and research in math, science, and engineering. Again, at a national level, we feel that research and understanding the development of model materials is extremely important and one that should be identified, again, by title and division within the appropriation for science education.

And the last area that we have identified and would urge your support on deals with the graduate and postdoctoral fellowship program, which has been one of the most successful. As you know, 2 years ago it was the only element that remained within the science education program of NSF. We would like to emphasize that we are recommending that science education be added to that fellowship program so that we have a way of improving the kind of people that become practicing science educators and a way of updating those people, as well.

We are recommending, as you see, an appropriation of $156 million to support science education activities within NSF for fiscal 1984.

Thank you very much, again, for the invitation to testify, and we would certainly be happy to respond to any part of our written testimony or anything that I have said here this morning.

Senator GARN. Well, thank you.

As you know, NSF intends to devote about 80 percent of its scientific education funds in fiscal year 1983 to materials development. What percent of NSF science resources in fiscal year 1984 would you devote to the development of materials and techniques versus actual training of teachers?

Dr. YAGER. Well, at the national level, I feel that more within NSF should be—I would say more than half—and I don't know.

Bill, do you want to get in the act here? This is a value judgment, but I think at the national level that developing model materials, model programs, leadership is extremely important, and the support locally and within States would be a far better way of dealing with the large numbers of teachers that are on the firing line in the schools of the Nation.

Mr. ALDRIDGE. Could I respond to that, Senator Garn?

I believe that some of the recommendations which you have made previously in this regard are still valid. We clearly need to do something about the upper 5 or 10 percent of the teachers in the schools who are basically competent but lack adequate upgrading of their background. That 5 percent or so, or 10 percent, those are the ones that NSF should focus on. That number is larger than the number which is included in the current appropriation at NSF. It is going to take more money than that.

But the emphasis you have placed upon the material development is a correct emphasis, and we strongly support that, but we hope that that can be coupled with some way of upgrading these best of our teachers so as to produce that cadre of people who can keep the effort going and provide the leadership for their colleagues back in the other institutions.

Senator GARN. Would your guess be that in 1984, 80 percent would be approximately as good a mix as it was in 1983?

Mr. ALDRIDGE. I believe if you look at the level of funding we proposed, it is roughly that portion in terms of teacher training, and we are talking about, principally, the best people. We have recommended in our testimony that those routine teacher training programs be done at the Department of Education, as you proposed.

Senator GARN. Thank you very much. We appreciate your help and support over the last year.

Mr. YAGER. Thank you

[The statement follows:]

STATEMENT OF ROBERT E. YAGER, PRESIDENT, NATIONAL SCIENCE TEACHERS ASSOCIATION

INTRODUCTION

There is Consensus in the Science Education Community

There has been a perception that the science education community lacked consensus on what should be done to resolve the problems in pre-college science and mathematics education that NSTA and others have documented. Recently, presidents and executive officers of the National Science Teachers Association, the American Association of Physics Teachers, the National Association of Biology Teachers, and the National Association of Geology Teachers formed a group called the Council of Science Teaching Associations. The education division of the American Chemical Society is also represented on our Council, although we are not permitted officially to represent their views.

The Council of Science Teaching Associations represents science teachers, science administrators, science educators, and teaching scientists at all levels. Thus the Council is fully representative of the subject matter disciplines--physics, chemistry, biology, and geology--at colleges and universities, as well as science teachers in these fields in elementary and secondary schools. Council organizations also include local science supervisors, state science supervisors, as well as those in schools of education who train science teachers. No other organization or group either includes this representation or reflects our views on the professional aspects of science education accurately.

The Crisis in Science Education

The crisis in science education at the pre-college level has received widespread publicity. As the primary source of data documenting the crisis, the National Science Teachers Association has been deluged with requests for detailed information and suggestions for solutions.

The NSTA data have been collected through several different surveys conducted over the past three years. Through these survey results and other studies, the crisis in elementary and secondary school science and mathematics education can be summarized as follows:

1. There are shortages of qualified secondary school science and mathematics teachers. The shortages are critical in mathematics and in physics, and severe in chemistry and physical science;

2. There is a serious mismatch between existing secondary school science and mathematics course content and the needs and interests of the vast majority of students. For those students who would aspire to careers in science or engineering, course content is obsolete;

3. There have been few attempts to alter instruction in schools in ways consistent with the growing body of new knowledge about how people learn science or mathematics;

4. Supplies, equipment, and other resource materials are severely limited or obsolete in most science classrooms and laboratories; those that exist are inappropriate to the science course content and teaching methods needed to update pre-college science education;

5. In elementary school offerings, science content is nearly nonexistent. Teachers are ill-prepared, resources are lacking, and the focus is on the so-called "basics" which have tended to ignore science.

The Shortage of Science and Mathematics Teachers

Supply

The shortage of science and mathematics teachers is documented by looking at supply and demand. The NSTA fall 1981 survey of 600 colleges and universities which prepare science and mathematics teachers showed a shocking ten-year decline: a 79 percent decline for mathematics and a 64 percent decline for science. (See attached paper by Shymansky and Aldridge.) Data from the NSTA fall 1982 survey show a further decline.

(See attached graph.) According to NCES data, the decline over this same period for teachers in other fields was only about 25 percent, and the decline in students was even less, about 20 percent.

Demand

The demand for science and mathematics teachers has been documented by Howe and Gerlovich at Iowa State in surveys of state science supervisors. NSTA derived "demand" data from surveys of secondary school principals. Our fall, 1982, survey showed that secondary schools employed 2 percent more science and mathematics teachers in 1982-1983 than in the previous year. With widespread calls for increased requirements for science and mathematics in high schools, we can expect further increases in the demand.

Use of Unqualified Teachers

Given that the supply of science and math teachers has dropped so drastically, how can the schools be finding teachers to fill classes? They have been employing unqualified or underqualified teachers. Last year half of the newly employed science and mathematics teachers in the U.S. were unqualified. Hiring such teachers is made possible through provisional or emergency certification, or through extremely low certification standards. The emergency measures have made possible the reassignment of teachers from physical education, home economics, social science, elementary education, and other fields where surpluses exist. A more common problem is transferring teachers within science, that is, from biology to chemistry and physics, without sufficient qualifications in those subjects. Over 30 percent of all science and mathematics teachers in grades 7-12 are unqualified or are severely underqualified to teach the subjects they have been assigned.

Principals are faced with an overall declining secondary school enrollment, a surplus of teachers in some areas, and a shortage of science and mathematics teachers. Who can blame a principal who reassigns a long-time faculty member from a non-science field into a science or math slot when no qualified teacher can be found? Moreover, even if a qualified person were available, tight budgets and teachers' contracts may preclude a principal from hiring a new staff member; thus the principal is forced to meet the need through staff reassignment.

Not Offering Needed Science & Mathematics Courses

The demand for science and mathematics teachers is even greater than indicated by open positions. According to NSTA's fall, 1982, survey results, for lack of teachers and/or resources, some 32,000 classes in science and mathematics were needed, but could not be scheduled in 1982-1983. Instead, some 640,000 children who wanted to take science or mathematics were required instead to take courses in other subjects for which no teacher shortage existed. Of the 17 million children in grades 8-12 this school year, 6.3 million are not taking science, and 6.4 million are not taking math.

Re-Training Unqualified Teachers

There are about 10,000 secondary school science and math teachers in the U.S. who are completely unqualified. Those in public schools have no certification, not even on an emergency or provisional basis. These teachers typically have never studied the subject they have been asked to teach, or those studies have included at best one or two introductory college courses.

If these teachers are to remain in the classroom, they need an intensive program of evening and Saturday course work during the school year, plus full-time study during the summer. They need individually designed programs of two or three years in duration, to allow for sequences of courses in math and science.

Upgrading Marginally Qualified Teachers

There are about 50,000 underqualified or marginally qualified science and math teachers in secondary schools of the U.S. This number is increasing dramatically each year. These teachers could be helped greatly by summer institutes, workshops, short courses, or part-time study during the academic year.

The Outdated Curriculum

The lack of sufficient numbers of trained teachers is compounded by the mismatch between science and mathematics courses and the needs and interests of students.

The science and mathematics courses in U.S. schools today are, for the most part, only slightly modified versions of those developed after Sputnik by teams of scientists and teachers. Yet, as Jerrold Zacharias, MIT physicist, and originator and developer of one of the first National Science Foundation course projects, PSSC Physics, said,

> "We had aimed only at the college-bound and college students because we could not do everything at once" (in testimony before the Subcommittee on Science, Research, and Technology of the Science and Technology Committee on February 19, 1980).

Our present science and math courses neglect the needs and interests of the vast majority of students. They focus on pure science and are largely devoid of practical applications, technology, or the relevancy of science to society's problems. They do not prepare people to enter the myriad of non-science occupations, which require general technological knowledge for which science is the base. Nor do these courses properly take into account the utilization of the computer and modern electronics. Technically well-trained people are needed by emerging or rebuilding industries to solve the economic problems we face.

The science and math courses in most schools have instructional and laboratory materials of the 60's, and they are obsolete! They don't even meet the needs now of those students who would become scientists and engineers.

New Instructional Strategies

The last ten years have provided much new information concerning the way humans learn. The current literature provides exciting new information concerning the adolescent mind, and how it grows and develops. Information from studies in cognitive psychology need to be applied in school science classrooms. Various new studies on the structure of the sciences themselves suggest different approaches to instruction, and new ways for science teachers to approach their tasks. Use of current research in all areas is needed as teachers are retrained.

Federal, State, and Local Responsibilities

The *delivery* of pre-college education is clearly a state and local responsibility in the United States. Teacher salaries, as well as *normal* supplies, materials, and equipment for science and math instruction must remain a local and state responsibility.

The federal responsibility for pre-college science and math education should be mainly at two agencies: The Department of Education and the National Science Foundation.

The Department of Education, through grants to State and Local Education Agencies, and through programs at NIE, can play an important role in addressing the science education crisis. In both the Administration's initiatives for 1984, and in H.R. 1310, funds are provided to address the science and math teacher shortage. A few states also have recently begun programs to increase the supply of such teachers. As a general principle, we would agree that *pre-service* training of science and mathematics teachers should be mainly a state and local responsibility, although in times of crisis, state and local funds should be augmented by federal support through the Department of Education. We would further agree that *routine and continual* in-service education programs for science and math teachers should be a local responsibility, but, again, in times of crisis, funding should be augmented by federal support through the Department of Education. The private sector should focus mainly on local and community assistance through provision of matching funds, resources, and personnel. Tax credits (as in the Glenn-McCurdy bill) would help stimulate private sector support.

In educational research, we believe that the NIE should be principally responsible for basic research on learning and on the use of various technologies to facilitate learning. The NSF should be responsible for research on the structure of course content in science and mathematics fields as well as research on the applications of basic research in learning science and mathematics that would result from NIE-supported basic research.

Curriculum research, which would focus on selections of content and sequence, K-16, should be a responsibility of the NSF. But creating curricula--that is, the selection of content and decisions on sequence, must be a local and state responsibility.

Why Federal Support Programs Should be Lodged at NSF

In deciding on NSF's responsibilities, we would agree with Senator Garn's recent statement in a letter to the NSF director:

> "The specific functions that we believe are appropriate for NSF are: materials development; public awareness and motivation; teaching and materials demonstrations; evaluation of materials and teacher training; research in learning and cognition; and high technology applications."

The NSF responsibility and authority is described in Public Law 507-81st Congress (64 STAT. 149, S. 147), Section 3.(2):

> "The Foundation is authorized and directed - (1) to initiate and support. . .science education programs at all levels. . ."

In spite of lack of action on the part of the National Science Board in carrying out this statutory obligation, we in science education contiue to believe firmly that the original reasons for lodging science education programs at NSF are still valid and important.

We must develop science and mathematics education materials and train our teachers in a partnership with those scientists who create the knowledge. That knowledge, and the methods used by scientists to acquire new knowledge, are constantly changing. Science and mathematics teachers need direct, cooperative relationships with scientists and mathematicians, and involvement of research scientists in science education is essential. The NSF is a small independent agency with a reputation for administering programs of very high quality selected on merit.

One Teacher's Testimony

On April 18, a Washington, D.C. physics teacher, John Thayer, gave a short, simple, but eloquent and moving testimony before Senator Hatch's Committee on Labor and Human Resources. Mr. Thayer said,

> "It is in fact very unlikely that I would be a classroom teacher today were it not for the training and inspiration offered in several NSF-sponsored summer institutes in which I participated within the period between 1965 and 1972. These institutes addressed curricula in ways which met several needs of science teachers. Knowledge of the subject matter was strengthened, and skills needed to effectively facilitate laboratory experiences were upgraded. Since teachers usually must find summer employment to supplement income, the stipends covering tuition and living expenses were necessary to attract teachers into the programs.
>
> I personally would not have attended the institutes without the stipend. I have seen physics teachers come and go during the post-institute period, some of whom might have stayed on had they received up-to-date skills training, encouragement and inspiration potentially available in a well-designed institute.
>
> I can say with a high degree of certainty that without the institute experiences I would have been taking advantage of other opportunities, for other opportunities were abundant at the time, and continue today.

The NSF summer institutes have had a lasting effect on my career. I'm not sure what success criteria were used to essentially abolish the institutes, but it seems to me that a program which improves competencies of teachers in critical areas, and influences them to keep on teaching is at least some measure of success."

The Need for New Course Material

The NSF course development projects of the 60's were excellent for their purpose. They developed courses, materials, and labs to prepare persons who would become research scientists and engineers. Until they became obsolete--which they did about ten years ago--these courses were excellent. But they evolved into essentially all present-day physics, chemistry, earth science, and biology courses and texts which are obsolete and inappropriate to the needs of the vast majority of students.

Rather than try to develop course content in each of the 16,000 school districts of the U.S., which would be wasteful and inefficient, and for which we could never assemble the needed concentration of expertise, it is important to have national efforts. The local schools can build their curricula by selecting and sequencing from among a variety of high quality and appropriate alternatives. National efforts have the benefit of widespread involvement of thousands of teachers in field trials and evaluation, assuring local school input into alternatives which are produced. Local schools also can adapt nationally produced materials for their special needs.

We need national course development efforts with teams of scientists, science teachers, science educators, and learning specialists, working in cooperation with publishers, equipment manufacturers, and computer and software companies. These course development projects should design courses with applications and labs that use modern microelectronics and computers.

Building Science Education Leadership

In one of our projects at NSTA, the Search for Excellence in Science Education, we have discovered important information about the teachers who have been leaders in creating excellent programs. Their average age is 51, and they have been teaching 17 years. These were the people who began their careers immediately before Sputnik and who participated most heavily in NSF institutes and projects.

If the nation is to build leadership and concentrate on meritorious programs, funding initiatives must increase the size of this leadership pool. Thus, there should be a national program component at NSF aimed at providing support for our best science and math teaching personnel to participate in conferences, workshops, institutes, and advanced degree programs.

The NSF has the staff, the organization, and the experience in research, development, teacher institutes, and undergraduate programs. Even with the severe reductions of staff in science education, many remain who were associated with development, course improvement, teacher education, and public understanding of science. The NSF has offered important programs through TV (3-2-1 CONTACT, NOVA, etc.), science museums, and other media to inform and educate both youth and adults in science education.

Federal Initiatives

In the last session of Congress, there were some 17 bills introduced to address the crisis in science education. In the current session several of these have been reintroduced, and others are being prepared.

A Proposed 1984 Budget for Science, Math, and Engineering Education Programs at NSF

Even though the NSTA is concerned principally with programs for teachers of science in the various disciplines, and at all levels, we are aware of problems in other areas. Our budget proposal encompasses all levels of science, math, and engineering education.

What About Numerous Low Funded Programs?

One of the arguments used in the past for eliminating science education programs was that there were too many low-funded programs and that, as such, they could not properly address the problems. The evidence is quite contrary to such assertions. During the entire history of the NSF, science education, as well as research programs have always had small budget components. Small components have the advantage of focusing on specific aspects of a large problem and seeking solutions. For example, in the NSF's proposed 1984 budget, there are 41 separate program elements in the mathematical and physical sciences, with several funded as low as $3 million each. Engineering has 26 program elements which average only $3.6 million each. Ironically, this is the number of program elements and the budget of the science education directorate when it was criticized for having too many low-funded programs and therefore eliminated.

A Proposed Science Education Budget for 1984

The budget which we propose for NSF science, math, and engineering education consists of ten major thrusts. Each of these addresses a certain area of concern. They are as follows:

1. NSF Program Evaluation and Assessment for Science, Math, and Engineering Education at All Levels ($3 million)
2. Coordination and Communications of Math, Science and Engineering Education Initiatives and Activities ($3 million)
3. Support Programs for Critically Needed Math, Science, and Engineering Personnel ($24 million)
4. Program to Link Math, Science, and Engineering Education and Basic Research ($6 million)
5. Resource Research, Development, and Improvement for Pre-college Science and Math Education ($20 million)
6. Resource Research, Development, and Improvement for Undergraduate Math, Science, and Engineering Education ($30 million)
7. Math, Science, and Engineering Education in Support of Research and Economic Recovery ($20 million)
8. Public Awareness and Youth Motivation Programs ($10 million)
9. Instructional and Learning Research in Math, Science, and Engineering ($10 million)
10. Graduate and Post Doctoral Fellowships to Prepare Science Educators, Scientists, and Engineers ($30 million)

Details of these programs are included as an appendix to this testimony. We strongly believe that the present crisis calls for this minimal effort on the part of NSF. The larger problems of inservice teacher education in math and science, as well as general resource improvement must come from block grants, Department of Education programs, and local and state support. The H.R.1310 Bill and S530 Bill are both aimed at the more general problem and except for parts of H.R.1310, neither bill properly addresses the appropriate budget for NSF.

We would urge this Committee to approve a budget along the lines we recommend, and that such support continue on a long-term basis, so that we do not face another crisis down the road. We now see the consequences of neglect, and without action, the health of American science, as well as our economic and defense strength are clearly threatened.

A 1984 Program Outline and Budget
for NSF Support of Mathematics, Science, and Engineering Education

1. Program Evaluation and Assessment ($3 Million)

   All levels 7-12, undergraduate and graduate

   A. Supply and demand

      Need for graduates and faculty in mathematics, science, and engineering

   B. Content effectiveness

      Analysis and assessment of curriculum and course content including sequence, scope, and delivery mechanisms

   C. Resource adequacy

      Instrumentation in instructional laboratories, utilization of TV and other media, use of computers in classroom and laboratory instruction

   D. NSF Program Review and Analysis

      Evaluation of NSF mathematics, science, and engineering education programs in terms of national needs and NSF program objectives

2. Coordination and Communication of Mathematics, Science, and Engineering Education Initiatives and Activities ($3.0 Million)

   A. A national Joint Council

      To coordinate efforts and mobilize support of science, mathematics, education, business, industry, and labor for the improvement of mathematics, science, and technology education

   B. State Joint Councils

      Work with the national group to utilize state resources and coordinate state efforts

   C. National Center for Mathematics, Science, and Technology Education

      Materials and instructional R&D under oversight of Joint Council

   D. National Mathematics, Science, and Technology Information and Computer Program Data Bank and Interchange

3. Support Programs for Critically Needed Mathematics, Science, and Engineering Personnel ($24.0 Million)

   A. Precollege mathematics, science, and technology leadership grants

      1. Presidential awards for teaching excellence

      2. Presidential mathematics, science, and technology teacher fellowship program (one year or up to three summers; salary matching)

   B. Development of excellence

      1. Presidential undergraduate faculty development fellowships for college and university teachers

      2. Summer institutes for precollege teachers in critical fields

   3. Presidential undergraduate student scholarships in critical fields ($2,500 per year for 1000 students each year, renewable) (Not a teaching program)

4. Programs to Link Mathematics, Science and Engineering Education and Basic Research ($6 Million)

   A. Research participation

      1. Precollege and four year college teacher research participation in universities

      2. Precollege, college, and university teacher research and research application participation in industry

      3. Undergraduate student research participation in universities and industry

      4. High school student research projects

5. Resource R&D for Precollege Mathematics, Science, and Technology Education ($20 Million)

   A. Course Content Development

   B. Instructional Laboratory R&D; Instrumentation and Methods

   C. Microcomputer and Advanced Technology Utilization

   D. Search for Excellence and Dissemination of Outstanding Examples in Mathematics, Science and Technology Education

6. Resource R&D for Undergraduate Mathematics, Science, and Engineering Education ($30 Million) (Mainly Four Year Colleges and Universities)

   A. New Laboratory Instrumentation

   B. Computer and Advanced Technology Utilization

   C. Research Development and Demonstration on Classroom and Laboratory Practice

7. Mathematics, Science, and Engineering Education in Support of Research and Economic Recovery ($20 Million)

   A. Science-based Technician Training (Community Colleges)

   B. Engineering and Technician Retraining

8. Public Awareness and Youth Motivation Program ($10 Million)

   A. Public TV Programing in Mathematics, Science, and Technology and Society

   B. Secondary School Mathematics, Science, and Engineering Clubs

   C. Special Programs for Women and Minorities on Mathematics, Science and Technology Careers

9. Research in Mathematics, Science and Engineering Education ($10 Million)

   A. Applications of Learning Research

   B. Research on Technology Utilization in Mathematics, Science, and Technology Education

C. Research on Scope, Sequence, and Discipline Articulation for Precollege Mathematics, Science, and Technology Education

10. Pre and Post Doctoral Support ($30 Million)

    A. Graduate Fellowships

    B. Post Doctoral Fellowships

    C. Senior Post Doctoral Fellowships

[From Educational Leadership, November 1982]

THE TEACHER CRISIS IN SECONDARY SCHOOL SCIENCE AND MATHEMATICS

By James A. Shymansky and Bill G. Aldridge

Our nation faces unprecedented problems in science and engineering education, the most severe of which is the critical shortage of qualified science and mathematics teachers at the secondary level. The problem is not new. Studies by the National Education Association (1981), Howe and Gerlovich (1982), and Akin (1980) have carried this message for several years. Yet school goes on. Is the problem not as severe as the data suggest, or worse than we realize?

We recently conducted surveys of secondary school science and math teachers, secondary school administrators, and placement directors at colleges and universities to get another reading on the science and math supply and demand. The results of our surveys and the highlights from some previous studies are reported here.

The Demand

In 1980 and again in 1981, Howe and Gerlovich (1982) surveyed the 50 state science supervisors to assess supply and demand for secondary school science and math teachers. Using a scale of 1 (a surplus) to 5 (a critical shortage), they found a shortage of physics (4.15), math (3.71), and chemistry (3.96) teachers in 1980. Shortages in physics and math became more severe in 1981 (physics, 4.45; math, 4.28). Moreover, the shortages are nationwide. Only two state supervisors reported an adequate supply of math teachers; four reported an adequate supply of science teachers; six reported an adequate supply of chemistry teachers.

Akin's (1980) findings are consistent with the Howe/Gerlovich report. In a survey of teacher placement directors in 1981, Akin reported math and physics as the highest and second highest areas of teacher demand. Chemistry teacher demand was 7th and earth science 11th of the 38 areas ranked. The NEA report (1981) also ranked mathematics and natural and physical sciences as areas where the supply of teachers is least adequate.

The data from these sources are convincing but not compelling because, after all, science and math continue to be taught. In order to provide further insight into the problem, we conducted three surveys in December 1981. Our results are quite revealing.

The Supply

We surveyed 450 teacher placement offices nationwide to obtain ten-year data on the number of teachers receiving certification in a science or math area and the number accepting teaching positions. Figures 1 and 2 show the number of persons available for placement and the number accepting teaching positions in math and science from 1971 to 1980. Clearly these graphs show the serious decline in the numbers of persons pursuing teaching degrees (79 percent decline in math and a 64 percent decline in science) and an equally serious decline in rate at which those prepared accept teaching jobs. The 1981 NEA report indicates a comparable decline in persons accepting teaching positions to persons prepared as teachers across all teaching fields between 1962 and 1979.

James A. Shymansky is Professor of Science Education, The University of Iowa, Iowa City; and Bill G. Aldridge is Executive Director of the National Science Teachers Association, Washington, D.C.

Who Is Teaching?

We also surveyed 1,000 secondary school administrators to find out who teaches science and math at their schools, how many were retiring, how many were leaving for other jobs, and how many were hired recently. Administrators reported that 91 percent of their science and math teachers were teaching those classes exclusively in 1981–82—a drop from 93 percent in 1980–81. They also reported about a 1 percent rate of retirement in the science and math teaching staff and a 4 percent exodus to nonteaching jobs. Taken alone, these figures are not earthshaking. But data on replacements for the retirees and the job-jumpers are shocking. Nationwide, *half* of all newly-employed science and math teachers for the school year 1981–82 were unqualified to teach science or math. These teachers were reported hired on an "emergency basis." Figure 3 shows, by region, the percentages of emergency science and math teachers hired for the 1981–82 school year; the numbers are staggering but not surprising when viewed in terms of Figures 1 and 2. There simply aren't enough new teachers to replace those leaving or retiring.

What the Teachers Report

More than 450 teachers responded to a third questionnaire aimed at finding out about their preparation, their assignments, and their plans. From the survey we know that 60 percent of the science teachers report cuts in their budgets for supplies and equipment. These cuts are occurring at a time when school labs are already obsolete and teacher morale is low. We also learned that 79 percent of these teachers have not completed a ten-hour course or workshop in over ten years; 69 percent have never attended a computer workshop. Finally, 40 percent reported never attending an inservice course or workshop since they began teaching—an average of 16 years!

When asked about their plans for the next five years, a startling 24 percent indicated they plan to seek employment outside of education. Assuming only 4 percent actually leave the classroom for nonteaching jobs (as the administrator data suggests) and assuming the graphs showing the new entries into science and math teaching level out, the forecast for secondary school science and math is still gloomy. The mean age of the science and math teaching population is 41. As that mean moves up so will the number of retirees and the number of teaching vacancies. Demographic studies predict a leveling off of school-age populations and even a slight increase in the 80s. When these data are mixed together, it is clear that the number of emergency teachers will go up also—and that the quality of math and science instruction will go down.

Summary

Recent independent surveys all show a severe shortage of qualified secondary school science and math teachers. There has been a catastrophic decline in the number of persons preparing to teach science and math and, of those prepared, less than half take teaching positions. Secondary schools are forced to hire unqualified persons. In addition, as the mean age of the science/math teaching force rises and more experienced teachers seek employment in nonteaching jobs, the quality of instruction in our secondary school science and math classrooms will deteriorate further. We cannot afford to wait for the normal laws of supply and demand to correct the problems. A generation of school-aged children is far too precious a commodity. EL

NSTA POSITION STATEMENT—SCIENCE-TECHNOLOGY-SOCIETY: SCIENCE EDUCATION FOR THE 1980'S

Preamble

Science and technology influence every aspect of our lives. They are central to our welfare as individuals and to the welfare of our society. All around us are examples of the importance of science and technology for production of food, shelter, clothing, medicines, transportation, and various sources of energy. There are an increasing number of science- and technology-related societal problems as well as increasing societal benefits. Science and technology are central to our personal and cultural welfare *and* to many societal problems. We must insure appropriate science education for all citizens.

However, the quantity and quality of science education for all people are not commensurate with the status of science and technology in society. When one would expect budgets, time spent on science-related subjects, and support for science education to be increasing, they are decreasing. At the same time these factors are declining, societal problems continue to require an understanding of science and technology. The burden of response rests heavily upon the shoulders of *all* persons associated with science endeavors—scientists, engineers, classroom teachers, other educators, and school administrators. Many of the problems we face today can be solved only by persons educated in the ideas and processes of science and technology. A scientific literacy is *basic* for living, working, and decision making in the 1980s and beyond.

There is a crisis in science education. The following science-technology-society problems demand immediate attention:

- understanding of science and technology are central to our personal and national welfare, yet public appreciation of science education has declined;
- increasing number of individual and societal problems which have an impact on the quality of life are related to science-generated technology;
- as the impact of science and technology on society has increased, the support for science education has decreased;
- compared to its recent past the United States has fallen behind in the production of scientific and technological goods and services; and
- women, minorities, and handicapped persons are under-represented in nearly all professional and technical roles in science and technology.

Declaration

The goal of science education during the 1980s is to develop scientifically literate individuals who understand how science, technology, and society influence one another and who are able to use this knowledge in their everyday decision-making. The scientifically literate person has a substantial knowledge base of facts, concepts, conceptual networks, and process skills which enable the individual to continue to learn and think logically. This individual both appreciates the value of science and technology in society and understands their limitations.

The attributes listed below help to describe a scientifically literate person. Each attribute should be thought of as describing a continuum along which the individual may progress. The progress of the individual's science education should be equated with progress along this continuum.

The scientifically and technologically literate person:

- uses science concepts, process skills, and values in making responsible everyday decisions;
- understands how society influences science and technology as well as how science and technology influence society;
- understands that society controls science and technology through the allocation of resources;
- recognizes the limitations as well as the usefulness of science and technology in advancing human welfare;
- knows the major concepts, hypotheses, and theories of science and is able to use them;
- appreciates science and technology for the intellectual stimulus they provide;
- understands that the generation of scientific knowledge depends upon the inquiry process and upon conceptual theories;
- distinguishes between scientific evidence and personal opinion;
- recognizes the origin of science and understands that scientific knowledge is tentative, and subject to change as evidence accumulates;
- understands the applications of technology and the decisions entailed in the use of technology;
- has sufficient knowledge and experience to appreciate the worthiness of research and technological development;
- has a richer and more exciting view of the world as the result of science education; and
- knows reliable sources of scientific and technological information and uses these sources in the process of decision making.

Recommendations for K-12 Grade Levels

Elementary School Science

Science should be an integral part of the elementary school program. It should be used to integrate, reinforce, and enhance the other basic curricular areas so as to make learning more meaningful for children.

A carefully planned and articulated elementary science curriculum should provide daily opportunities for the sequential development of basic physical and life science concepts, along with the development of science process and inquiry skills.

Elementary science should provide opportunities for nurturing children's natural curiosity. This helps them to develop confidence to question and seek answers based upon evidence and independent thinking. Children should be given an opportunity to explore and investigate their world using a hands-on approach, with instructional materials readily available.

The focus of the elementary science program should be on fostering in children an understanding of, an interest in, and an appreciation of the world in which they live.

Middle/Junior High School Science

The middle/junior high school science curriculum should be designed to accommodate the needs and learning styles of the early adolescent. Students should be provided with daily opportunities to explore science through reading, discussion, and direct learning experiences in the classroom, laboratory, and field.

Middle/junior high school science should contribute to the development of scientifically literate persons and not simply prepare them for the next science course. National studies have shown that often middle/junior high school science is designed to prepare students for high school biology with no emphasis on physical science. In addition, studies show that fewer than one half of the junior high students going on to high school take chemistry and physics. Therefore, it is imperative that an important thrust of middle/junior high school science be toward the physical and earth sciences.

Middle/junior high school students should continue to develop science process skills and content. Middle/junior high school science should emphasize the *application* of both skills and content to the students' personal life situations and enable students to begin examining societal issues that have a scientific and technological basis. Middle/junior high school students need to *apply* what they have learned soon after their instruction to insure the lasting value of the experience.

High School Science

The high school science curriculum should enable students to further develop their scientific and technological literacy. Courses incorporating well-designed laboratory and field work help to meet this need.

A balanced core of two years of science should be required of *all* students, consisting of one year of life science and one year of physical science—both taught in a science-technology-society context. The courses should provide students with opportunities to develop skills in identifying science-based societal problems and in making decisions about their resolution.

Students interested in exploring or preparing for careers in science, engineering, or technical fields should have the opportunity to take additional discipline-based courses in advanced biology, chemistry, physics, and earth sciences. These courses should be planned and sequenced to take advantage of the students' increasing command of mathematics.

Time on science learning

- Lower elementary level (grades K-3): a minimum of 1½ hours/week of science should be required.
- Upper elementary level (grades 4-6): a minimum of 2½ hours/week of science should be required.
- Middle/junior high school level (grades 7-9): a minimum of 1 hour/day for at least 2 full years of science should be required of all students.

- Senior high school level (grades 10-12): a minimum of 1 hour per day for 2 full years of science should be required. The courses should represent a balance of physical and life sciences.

Emphasis on programs for all students

- In elementary, middle, junior high, and senior high school grades, science education programs should provide basic concepts for all students. Opportunities should be available for students with diverse interests and commitments, including students with exceptional interests and talents in science.

Emphasis on science education for the adult general population

- Schools should provide educational opportunities in science for all the adult population in their community.
- Colleges, universities, and national organizations should increase emphasis on science education for adults through public lectures and seminars.
- The important contributions of out-of-school education programs such as museums, TV, planetariums, and zoos, should be recognized and utilized by all those involved.

Emphasis on the professional development of science teachers through inservice opportunities

- Colleges, universities, and other agencies should develop teacher education and inservice education programs that are consistent with this policy statement.
- School districts should provide opportunities, encouragement, and recognition for teachers who maintain a high level of professional competence.

Emphasis of laboratory and field activities

- Elementary level laboratory and field activities should stress the development of basic inquiry skills.
- Middle/junior high school level laboratory and field activities should stress the application and extension of inquiry skills as a means of obtaining knowledge and resolving problems.
- High school level laboratory and field activities should emphasize not only the acquisition of knowledge, but also problem solving and decision making.

Science instruction matches students' cognitive, physical, social, and emotional development

- Schools should provide objectives, content, and instructional strategies that are appropriate to the student's stage of mental, moral, and physical development.
- Varying strategies and materials should be provided at all grades to accommodate students with various levels of learning skills and mental development.

Emphasis on science-related societal issues

- Elementary level: a minimum of 5 percent of science instruction should be directed toward science-related societal issues.
- Middle/junior high school level: a minimum of 15 percent of science instruction should be directed toward science-related societal issues.
- Senior high school level: a minimum of 20 percent of science instruction should be directed toward science-related societal issues.

This NSTA Position Statement was adopted unanimously by the Board of Directors in 1982. Additional copies of this position statement are available; write to the National Science Teachers Association, 1742 Connecticut Ave., N.W., Washington D.C. 20009.

STATEMENT OF JOHN WRIGHT, PRESIDENT, UNIVERSITY OF ALABAMA IN HUNTSVILLE

Senator GARN. Next, Dr. John Wright, president of the University of Alabama, on behalf of the American Association of State Colleges and Universities and 19 other organizations.

Dr. WRIGHT. Thank you. My name is John Wright. I am president of the University of Alabama in Huntsville, and I am pleased to have the opportunity to testify on behalf of the 55 member institutions of the American Association of State Colleges and Universities.

We do educate approximately 20 to 25 percent of the U.S. graduate students in the science, engineering, and scientific teaching areas.

My appearance before this committee today is in marked contrast to the situation which confronted me when I last appeared before you, Senator Garn, on the House side. At that time, there was not a national awareness of the problems that we are facing today that manifest itself in the passage of H.R. 1310 and the Senate Labor and Human Resources Committee's approval of S. 530. I would like to comment positively on several aspects of the administration's budget, particularly the $39 million requested for science and engineering education, including $19 million for the graduate fellowships and $20 million for precollege teacher improvement program and the $3 million requested for undergraduate college research to support the faculty at predominantly undergraduate institutions.

While we are supportive of the increases in science education recommended by the House Appropriations subcommittee, we would urge that you build on that $70 million increase. We are disturbed that there is a shifting of funds out of the research directorate.

Senator, I am going to deviate from the written testimony for a minute, because I have just read the report of the Business Higher Education Forum that President Reagan constituted about a year ago.

The one central recommendation that forum made was that we must develop a consensus that industrial competitiveness on a global scale is crucial to our social and economic well being.

The forum concluded that our Nation's ability to compete depends on three areas: The production capital investment technological innovation—and that includes basic research and conducting that basic research and moving that basic research into commercialization of new products—and the development of human resources.

Two of those directly relate to the kind of testimony you are hearing today. I am thinking of research and of the human resources. We simply must not treat them as tradeoffs but as interdependent elements in our national, social, and economic goals.

H.R. 1310 and S. 530 establish programs for a limited number of years. They bear upon the capability of higher education to insure the production of new knowledge and skilled manpower, but they treat this in an emergency nature. In my judgment, we are dealing with the clinic condition and that we must look not to emergency measures alone, but to the long-term health of the science education enterprise.

I would urge the committee to consider our recommendations or the following programs. These have been defined in higher education's agenda that had been worked out by the large number of organizations that I represent today.

First is a program providing opportunities for teachers, young scholars, and researchers through expanded graduate fellowships, traineeships, and faculty research awards; second is a program to upgrade and improve instructional programs at all levels; third, a program to upgrade instructional equipment and its utilization; and finally, a program to strengthen educational research in science and mathematics.

In my own institution this year, we have been attempting to fill 10 positions in engineering. We have expended $13,000 bringing candidates to the campus, and we now have four acceptances. We have 40 other offers outstanding. The shortage is crippling us in terms of providing the engineers that are needed in our own community's economic development.

I am also on the board of a school district where we have been attempting to recruit physics teachers and mathematics teachers, and it is exceedingly difficult. I can testify from my own experience.

On the second part, where we refer to the instructional programs at all levels, I think it is exceedingly important to recognize that being a part of the scientific community is important, and it is important at all age levels because you can only enter the scientific community at an early age. Once students make the choice not to continue in their mathematics, they are no longer viable candidates for being part of the scientific community. So that it is terribly important to think that a high school is a spot where the students can make that choice to be in the scientific community or they can opt for never being a part of it.

Third, on the instructional equipment, the tax incentives that have been adopted by the Congress have been exceedingly helpful, and we have been recipients of that, but almost inevitably, they are accompanied by needs to purchase things where there actually is a dollar need. I believe that the instructional equipment programs that are envisioned would be a great complement to the tax incentive approaches that have already been passed.

Finally, providing an understanding and an ability to monitor on a broad basis is crucial to this overall scientific education effort. I would like to acknowledge your role, Senator Garn, as chairman of this subcommittee; you played a role in the development of the fiscal year 1983 spending and your foresight and diligence in working out an acceptable and viable plan is to be commended.

I would be happy to answer any questions. I am very pleased to have had the opportunity to testify.

Senator GARN. Thank you.

I am particularly interested in your proposal to upgrade undergraduate instructional equipment, in particular, you are suggesting that the scientific equipment could be shared among institutions regionally and between academic and business sectors. How would you propose to establish this sharing, and what role do you see for the Federal Government in that?

Dr. WRIGHT. I would say that incentives in a program cf the type that the National Science Foundation had several years ago—I happened to be a staff member at that time—an incentive program where the Federal Government could use moneys to cause these kinds of coalitions to come about. I think in the absence of incentives of some sort, they are not as likely to do so.

Senator GARN. Thank you very much. We appreciate your being here today.

Dr. WRIGHT. Thank you.

Senator GARN. Your prepared statement will be inserted at this point in the hearing record. Also, we have received two additional statements relating to the National Science Foundation which will be inserted in the hearing record.

[The statements follow:]

STATEMENT OF JOHN WRIGHT, PRESIDENT, UNIVERSITY OF ALABAMA IN HUNTSVILLE

My name is John Wright and I am President of the University of Alabama in Huntsville, a position I have held for approximately five years. Prior to assuming the presidency at UAH, I served as the Chief Academic Officer for the West Virginia Board of Regents and Dean of the College of Arts and Sciences at West Virginia University and at Northern Arizona University. In addition to my administrative roles, I have served on the faculty at West Virginia Wesleyan College, Northern Arizona University, and West Virginia University where I held the rank of Professor of Chemistry. I received a Ph. D. degree in Chemistry from the University of Illinois in 1951 and did post-doctoral work at the University of London in 1962 and at the University of Michigan in 1965. I have also worked as a research scientist for seven years in industry and have been a member of the staff at the National Science Foundation. I have also been a member of the Army Science Board.

I am pleased to have the opportunity to testify on FY 1984 National Science Foundation appropriations with particular emphasis on science, mathematics and technology education.

I represent the 355 member institutions of the American Association of State Colleges and Universities, and am currently Chairman of its Committee on Science and Technology. With a combined enrollment of over 2 1/2 million students, the 355 state college and universities of AASCU enroll one out of five of all baccalaureate degree students in the country. Our institutions play a major role in our nation's science effort. Many students who ultimately pursue advanced degrees in scientific and technical fields receive their basic training at our institutions. A large portion of the nation's future elementary and secondary school science and mathematics teachers are educated at AASCU colleges and universities. These teachers must be able to communicate the knowledge and skills that will enable our youth to live in an increasingly complex and technology-dependent society. AASCU institutions award close to one-fifth of the B.S. degrees in engineering annually and over one-third of the B.S. degrees in computer and information sciences.

My testimony is also supported by the 20 associations that participated in the development of "Higher Education's Agenda in Science, Mathematics and Technology Education". These associations collectively include the over 3,000 degree granting American colleges and universities who will play a major role in the economic revitalization and technological advancement of this nation.

FY 1984 NSF BUDGET APPROPRIATION

My appearance before this committee today is in marked contrast to the situation that confronted me as a Congressional witness in 1982. The Administration's budget request for science education was then restricted to maintaining the status quo for the fellowship programs.

During the course of this past year there has been a growing recognition of the importance of a revitalized federal role in science education. This trend has manifested itself in the House passage of H.R. 1310, Emergemcy Mathematics and Science Education Act and the Senate Labor and Human Resources Committee's approval of S. 530, Education for Economic Security Act.

In addition, the Administration's own budget request for FY 1984 science education funding represents their growing awareness of the critical nature of the problem.

I would like to positively comment on several aspects of the Administration's FY 1984 budget request:

* $39 million requested for science and engineering education, including $19 million for expanded graduate fellowships plus $20 million for new precollege teacher improvement programs;

* $3 million requested for undergraduate college research support to encourage independent faculty research at predominantly undergraduate institutions.

In addition to these education functions the National Science Foundation proposed substantial increases in its research budget, particularly in the mathematical and physical sciences and engineering. The budget also calls for a new program of Presidental Young Investigators Award and a major initiative to support research instrumentation needs. We are supportative of all these efforts and urge the Subcommittee to approve these increases and programs.

The Administration's request for science education funding for FY 1984 is an important foundation for this Committee to build upon in setting its own budget priorities. We are doubtful, however, that the levels of funding requested by the Administration are adequate in terms of actual needs.

Last week the House Appropriations Subcommittee on HUD-Independent Agencies approved $70 million for science education. We regard this amount of funding as a foundation for this Subcommittee to build upon. The additional $31 million recommended in that Subcommittee is an improvement, but still below the amounts necessary if we are to restore the excellence of science education in our nation's classroom.

While we are supportive of the increases in science education recommended by the House Appropriations Subcommittee we are disturbed that there was a shifting of funds out of the research directorates. The groups I represent have always underscored the importance of both the education and research functions of the National Science Foundation. We strongly believe that the strength of education depends upon the vitality of research and that neither should be funded at the expense of the other.

In deciding upon its FY 1984 recommendations for science education I urge this Subcommittee not to lose sight of the National Science Foundation's mandate to support science education. H.R. 1310 and S. 530 establish programs for a limited number of years. However, there are compelling long range needs that bear upon the capability of higher education to ensure the production of new knowledge and skilled manpower, necessary for our long range economic welfare and military security. Clearly, there is a continuum in the decline of science education capacities. H.R. 1310 and S. 530 treat one aspect of this continuum but the National Science Foundation must look to the extended dimensions of the current problems and provide continuity of support for its mandated educational function.

As guidance for the Subcommittee's efforts to determine actual funding needs, I offer the suggestions contained in "Higher Education's Agenda in Mathematics, Science and Technology Education." A copy of this document is attached to my testimony and I request that it be incorporated in the record. Higher Education's Agenda represents the collective thinking of all sectors of the higher education community. It contains specific programmatic suggestions for federal support of science education.

I would urge the Committee to consider our recommendations for the following programs at the National Science Foundation:

- a program providing opportunities for teachers, young scholars and researchers through expanded graduate fellowships, new traineeships and faculty research awards;
- a program to upgrade and improve instructional programs at all levels;
- a program to upgrade instructional equipment and its utilization; and
- a program to strengthen educational research in science and mathematics

We think that these programs should be an important part of any expanded National Science Foundaton role in science education.

A Program of Opportunities for Teachers, Young Scholars and Researchers through Expanded Fellowships, New traineeships, Research Incentive Awards and Faculty Awards for Summer Study

We propose the establishment of a series of new and expanded programs to provide fellowships, traineeships, summer study support, research incentive awards, and faculty renewal awards to increase the production of scientists, engineering faculty, researchers and science educators, and to upgrade teaching faculty.

Four programs should be supported in this area:

(1) an expanded Graduate Fellowship Program. The structure and effectiveness of the NSF Graduate Fellowship Program, once a premier symbol of the nation's commitment to excellence, has diminished steadily over the years. The NSF fellowship program should be expanded by increasing the number of awards and the amount of the stipend. We are pleased to note that the Administration has already taken the first step in this direction.

(2) A new Traineeship Program for science, technology and mathematics educators. Trainees would be selected by participating departments, schools and institutions from among individuals with demonstrated potential to excel as science, technology and mathematics educators at elementary/secondary and undergraduate levels. Institutions receiving traineeships would gather education specialists and faculty from departments of science, mathematics and technology to create for the trainee a new or improved quality program for preparing the next generaton of science educators.

(3) A new Young Faculty Research Incentive Awards Program. The challenges facing young faculty who seek to establish their first research programs are almost overwhelming. A program offering

stable support (averaging $50,000 per year award) to assist them in starting academic research careers would help to sustain the quality and flow of individuals into key fields of technology. This is similar to the Presidential Young Investigators Award Program proposed by the Administration.

(4) A new program of Faculty Awards for summer study, sabbaticals, and special research opportunities. This program would provide awards for summer support to permit currently employed faculty to take advantage of upgrading opportunities; and a program for experienced faculty for six- to twelve- month periods at salary equivalent to current levels to: (a) permit revitalization, and experience with new research techniques and advanced research discoveries for those who have been isolated from research institutions and centers for six or more years; and (b) provide for intensive development of teaching techniques and materials in problem areas. Awards should be provided on a competitive basis to individuals whose institutions certify that the applicant's principal function is undergraduate teaching in a science-related discipline.

A Program to Upgrade and Improve Instructional Programs in Mathematics, Science and Technology at All Levels

Continuing demands are placed on science educators to keep pace with evolving technological innovations. Updated instructional materials are needed to enhance student motivation and to advance the lagging state of science learning. The need for new instructional materials is particularly acute at the unergraduate level for both general students and engineering majors.

We propose a new program to improve undergraduate instructional programs and develop school and college materials for mathematics, science and technology education.

Priority areas include:

(1) restructuring subject matter science courses to reflect state-of-the-art technology and the changing needs of undergraduate;

(2) applying teaching and learning research concepts to the development of mathematics, science and technology instructional materials for schools and colleges; and

(3) stimulating collaborative educational institution/industry efforts in the development of improved programs for schools and colleges.

A Program to Upgrade Undergraduate Instructional Equipment and Its Utilization

The outmoded condition of the instructional equipment in the nation's colleges and universities is well-documented. The absence of state-of-the-art equipment and facilities has immediate consequences in the preparation of today's students, and far-reaching implications for the nation's ability to remain scientifically and technologically competive.

We propose a two part program for:

(1) acquisition and installation of modern instructional equipment for use in teaching and training for teaching; and

(2) sharing science equipment among institutions regionally and between the academic and busines sectors.

We further suggest that a balanced program is needed involving all federal agencies that support research and related education programs to make the acquisition of equipment and renovation of laboratories an allowable component of research proposals:

Programs for Precollege Teacher Training

In addition, I would like to comment on the National Science Foundation's role in teacher training. In past years, the National Science Foundation has conducted highly succesful institutes that provided secondary schools teachers with indepth scientific knowledge. These institutes have positively impacted on many thousands of teachers and, in turn, upon their students. The FY 1983 Appropriations Act (P.L. 97-272) requires that an activity at the precollege level, primarily aimed at mathematics and science teacher training in the secondary schools be established. I would like to acknowledge the role that the Chairman of this Subcommittee, Jake Garn, played in the development of the FY 1983 Spending plan. His foresight and diligence in working out an acceptable and viable plan is to be commended.

The National Science Foundation institutes draw upon the highly technical and scientific knowledge that is necessary to upgrade the subject matter content of the teacher. As a Federal science agency with broad ties to academic sciences and engineering, NSF has a unique responsibility to foster the involvement of professional scientists and engineers in the improvement of education in the sciences, mathematics and technology at all levels. This is particularly important because of the rapid advances of these fields. The establishment of precollege teacher training activities at the National Science Foundation is an important element in achieving an improved system of precollege math and science education.

A Program to Strengthen Education Research in Science and Mathematics

The National Science Foundation, in consultation with the National Institute of Education (NIE) and the cognitive, engineering, and information science programs in the research directorates, should be authorized to conduct research and development activities in the following areas: cognitive science applied to math and science learning, the instructional uses of computers and other information technologies, and the increased understanding of higher order academic skills related to future learning and work. Program support should focus on the use of research and development for improvement of school and college instruction in mathematics, science and technology.

NSF and NIE should work together and draw upon their particular strength. NSF, with the ties to practicing scientists, engineers and basic research directorates, will be in a position to work in the areas of computers and information technologies, and to apply basic research in human cognition to learning and instructional program development activities. NIE has the associations with education policy makers and practicing educators in schools and colleges, and has the capacity to merge teacher and learning research with the substantive instructional areas of mathematics and science.

Both agencies should consult on the the development of R & D agendas, the selection of peer reviewers (to assure high quality work), and the dissemination of R & D results.

I appreciate the opportunity you have given me to appear before this Submittee and will be happy to answer any of your questions.

HIGHER EDUCATION'S AGENDA IN MATHEMATICS, SCIENCE AND TECHNOLOGY EDUCATION

Background

America's productivity, economic welfare and national defense are threatened by the growing crisis in our education system. Awareness of this problem manifested itself during the 97th Congress in numerous legislative proposals, reports of the National Science Board Commission on Precollege Education in Mathematics, Science and Technology, the proliferation of private sector programs, and widespread media attention.

The dimensions of the problem are multifaceted and permeate our educational system from the precollege level to the community college, the undergraduate classrooms and the graduate universities. There is considerable evidence of the decline of our scientific educational system:

- documented declines in student achievement in mathematics and sciences. Average science and mathematics scores on standardized college entrance tests have been dropping steadily for 20 years;

- a serious shortage of qualified mathematics and science teachers. During the 1970's the number of secondary school mathematics teachers being trained declined 77 percent; science teachers being trained declined 65 percent. Some 50 percent of newly employed teachers nationwide are currently uncertified and unqualified to teach mathematics and science. This situation is exacerbated by the rapid departure of trained classroom teachers for better paying jobs in industry;

- at least 2,000 vacant faculty positions in university engineering departments. These vacancies have resulted in enrollment limits which, in turn, impede the training of adequate numbers of B.S. engineers;

- the obsolescence of much of the instrumentation and equipment used in college and university laboratories has been well documented;

- tens of thousands of technician openings are going begging even as the national rate of unemployment approaches 11 percent. The Congressional Budget Office projects that new technologies will make 3 million more jobs obsolete by the end of this century;

- secondary students are taking fewer courses in math and science than in years past, and fewer courses are being offered. Half of all U.S. high school students take no mathematics after the tenth grade, while in other industrialized nations, particularly Japan and Germany, increasing emphasis is being placed on science and mathematics education;

- since 1972 there has been a 54 percent decline in the number of Ph.D.'s awarded in engineering yearly to U.S. nationals, while Ph.D.'s in engineering awarded to foreign students have more than doubled; and

- Japan, one of our primary competitors in the world marketplace, produces twice as many engineers as we do even though their population base is half ours. From 1970 to 1977 the number of engineers per 1,000 workers increased by 46 percent in Japan and decreased by 9 percent in the U.S.

There is bipartisan recognition of this growing crisis. President Reagan, in a message to the 1982 National Academy of Sciences Convocation on Science and Mathematics in the Schools, declared: "The problems today in elementary and secondary school science and mathematics education are serious -- serious enough to compromise America's future ability to develop and advance our traditional industrial base to compete in international marketplaces." The Special Task Force on Long Term Economic Policy of the House Democratic Caucus observed in its report Rebuilding the Road to Opportunity: "in the future, a well-educated, well-trained workforce will be essential to sustained economic growth . . . the future will be won with brainpower . . . The research we must undertake to produce new technologies requires talent -- yet we are not graduating sufficient numbers of scientists, engineers and technicians."

The Federal Role

Although there is now general agreement on the dimensions of the problem, there is no consensus on the solution. The higher education community views the current crisis with alarm. Constructive actions at the institutional, local, state, and national levels are necessary to forestall a further deterioration.

We believe the federal government must play a central role in providing leadership and support for a variety of initiatives outlined in the following pages. Sustained federal investment is required because the problems are national in scope and because failure to resolve them would have grave implications for our national well-being and defense capability. These investments will maximize the return on scarce federal resources, encourage local and individual initiatives, minimize federal control of these efforts, and provide incentives for collaboration among all sectors.

America's postsecondary institutions -- two-year, four-year, and graduate -- all have a major role to play in restoring our economic health and bolstering our national defense. Their resources should be directed to the most critical problems that beset the science education system so that adequate numbers of qualified mathematics and science school teachers will be trained; education for technology and science-related careers will be provided; the proper research environment, experience and tools to train the next generation of scientists, engineers and researchers will be encouraged; and research to improve instruction and the educational uses of information technology will be supported. With such steps students will be sufficiently science-literate to live in an increasingly technological world and have the opportunity to prepare for careers in the sciences; and currently employed teachers, engineers, scientists and researchers will have opportunities to upgrade their skills.

Thus we urge the 98th Congress to enact major legislation that will enable colleges and universities to further fulfill their mission as a vital force in solving the current science, mathematics, and technology education crisis. The higher education community recognizes the interrelationship among all levels of education in resolving the crisis and supports the efforts of the precollege sector to solve their own unique and compelling problems. However, this paper attempts only to address the crisis from the perspectives of higher education.

Proposed Federal Program

The higher education community -- collectively listed at the end of this paper -- supports the establishment of five new programs to be administered by the Department of Education and the National Science Foundation. These programs represent the top priorities of the higher education community regarding science, mathematics and technology education. Each is an essential component of the total effort needed in this area.

For the Department of Education, we propose two programs: a $200 million program for teacher training initiatives to improve science, mathematics and technology education, and a $25 million program to strengthen educational research in these areas.

For the National Science Foundation, we propose three programs: a $100 million program providing opportunities for teachers, young scholars and researchers through expanded graduate fellowships, new traineeships and faculty research awards; a $50 million program to upgrade and improve instructional programs on all levels; and a $200 million program to upgrade instructional equipment and its utilization.

The total $575 million dollar federal investment proposed provides a significant number and variety of new awards to individuals, schools, and colleges. Coupled with local, state and private sector initiatives, these programs will make a substantial contribution toward the revitalization of the science education in the nation.

In embarking on this new federal effort in sciences, math and technology education we must acknowledge the importance of a sustained national commitment to basic research. Without quality research programs, the education enterprise will wither. Our proposal for new federal support of science education should be viewed as an integral part of this commitment. Both research and education are necessary for the economic vitality and defense strength of the U.S. Neither should be funded at the expense of the other.

Title: A Program for Teacher Training Initiatives to Improve Science, Mathematics and Technology Education

Agency:	Department of Education
Authorization:	$200 million
Target:	3,000 grants at up to $200,000 each to schools and colleges

We propose the establishment of a grant program for schools, colleges and universities to be administered by the Department of Education with proposals to be evaluated through a peer review process involving consultation with NSF to identify field readers. The purpose of these grants is to encourage the linkage between colleges and universities and public and private elementary and secondary schools in the improvement of science education. Grants would allow maximum institutional flexibility to be responsive to local needs, and would be awarded according to plans developed by the recipient institution in collaboration with one or more public or private schools or school districts and other appropriate agencies or councils. Priority activities might include, for example:

(1) summer institutes and workshops and a parallel program of inservice education, conducted by higher education institutions across all states and regions to provide practicing teachers and supervisors with up-to-date science and mathematics information and pedagogical concepts;

(2) projects to enhance the capacity of schools and colleges to meet the professional needs of both new and practicing teachers, including faculty development activities; and

(3) support for exemplary state, local and institutional efforts to attract, retain and motivate teachers to pursue careers in precollege mathematics and science education, as well as identification of teacher training projects providing nationally significant examples of campus-based inservice, school site staff development, and the integration of substantive knowledge in mathematics and the sciences with effective teaching strategies, and the dissemination of information about these programs.

Title: A Program to Strengthen Educational Research in Mathematics/Science and Technology Education

Agency:	National Institute of Education, in consultation with the National Science Foundation
Authorization:	$25 million
Target:	New grant competitions for specific research yielding 10 major programmatic awards, and up to 200 individual research grants.

Research on student learning and school and college instruction in math, science, and technology education (particularly focused on secondary schools) is an essential resource for other federal, state and local programs for improving math and science education.

We propose a new program to strengthen teaching and learning research through grants focused on the identification of successful instruction and the application of cognitive research to improved instructional programs. The program will support large scale research competitions dealing with:

(1) research on thinking, teaching and learning related to instruction in math, science and technology;

(2) research on the uses of modern instructional technologies; the status, means of assessment, and selection of instructional software and other mathematics, science and technology education materials;

(3) research on local, state and institutional policies enhancing or inhibiting the recruitment, retention and professional development of school and college math and science faculties; and

(4) research on school, institution and state needs and operations as they relate to the development and support of remedial programs at all levels of education.

Title: A Program of Opportunities for Teachers, Young Scholars and Researchers through Expanded Fellowships, New Traineeships, Research Incentive Awards, and Faculty Awards for Summer Study

Agency:	National Science Foundation
Authorization:	$100 million
Target:	$15 million to expand existing graduate fellowships and to create 600 new graduate fellowships; $15 million for new institutional traineeship programs; $50 million for 1,000 new faculty research incentive awards; $20 million for faculty awards for summer study sabbaticals and special research opportunities.

We propose the establishment of a series of new and expanded programs to provide fellowships, traineeships, summer study support, research incentive awards, and faculty renewal awards to increase the production of scientists, engineering faculty, researchers and science educators, and to upgrade teaching faculty.

Four programs should be supported in this area:

(1) An expanded Graduate Fellowship Program. The structure and effectiveness of the NSF Graduate Fellowship Program, once a premier symbol of the nation's commitment to excellence, has diminished steadily over the years. The NSF fellowship program should be expanded by increasing the number of awards and the amount of the stipend. To achieve this, we propose at least doubling the amount of money available for these fellowships (from $15 million to $30 million) and increasing by approximately one-third both the number and size of the current awards (from 1,400 to 2,000 and at least $15,000 rather than $10,900 per award).

(2) A new $15 million Traineeship Program for science, technology and mathematics educators. Awards of up to $150,000 would be made to colleges and universities. Trainees would be selected by participating departments, schools and institutions from among individuals with demonstrated potential to excel as science, technology and mathematics educators at elementary/secondary and undergraduate levels. Institutions receiving traineeships would gather education specialists and faculty from departments of science, mathematics and technology to create for the trainee a new or improved quality program for preparing the next generation of science educators.

(3) A new $50 million Young Faculty Research Incentive Awards Program. The challenges facing young faculty who seek to establish their first research programs are almost overwhelming. A program offering stable support (averaging $50,000 per year per award) to assist them in starting academic research careers would help to sustain the quality and flow of individuals into key fields of science, mathematics, engineering and technology. 1,000 awards would be authorized to average $50,000 per year.

(4) A new $20 million program of Faculty Awards for summer study, sabbaticals, and special research opportunities. This program would provide 3,000 awards at $5,000 each for summer support to permit currently employed faculty to take advantage of upgrading opportunities; and a $5 million program for experienced faculty for six- to twelve-month periods at salary equivalent to current levels to: (a) permit revitalization, and experience with new research techniques and advanced research discoveries for those who have been isolated from research institutions and centers for six or more years; and (b) provide for intensive development of teaching techniques and materials in problem areas. A total of $20 million authorized in this area will provide awards on a competitive basis to individuals whose institutions certify that the applicant's principal function is undergraduate teaching in a science-related discipline.

Title: A Program to Upgrade and Improve Instructional Programs in Mathematics, Science and Technology at All Levels

Agency:	National Science Foundation
Authorization:	$50 million
Target:	1,000 instructional improvement projects at up to $200,000 each.

Continuing demands are placed on science educators to keep pace with evolving technological innovations. Updated instructional materials are needed to enhance student motivation and to advance the lagging state of science learning. The need for new instructional materials is particularly acute at the undergraduate level for both general students and science and engineering majors.

We propose a new program to improve undergraduate instructional programs and develop school and college materials for mathematics, science and technology education.

Priority areas include:

(1) restructuring subject matter science courses to reflect state-of-the-art technology and the changing needs of undergraduates;

(2) applying teaching and learning research concepts to the development of mathematics, science and technology instructional materials for schools and colleges; and

(3) stimulating collaborative educational institution/industry efforts in the development of improved programs for schools and colleges.

Title: A Program to Upgrade Undergraduate Instructional Equipment and Its Utilization

Agency:	National Science Foundation
Authorization:	$200 million
Target:	Grants to colleges and universities

The outmoded condition of the instructional equipment in the nation's colleges and universities is well-documented. The absence of state-of-the-art equipment and facilities has immediate consequences in the preparation of today's students, and farreaching implications for the nation's ability to remain scientifically and technologically competitive.

We propose a two-part program for:

(1) acquisition and installation of modern instructional equipment for use in teaching and training for teaching; and

(2) sharing science equipment among institutions regionally and between the academic and business sectors.

We further suggest that a balanced program is needed involving all federal agencies that support research and related education programs to make the acquisition of equipment and renovation of laboratories an allowable component of research proposals.

N. B.: Existing laws and recent legislative proposals have attempted to utilize the mechanism of tax incentives to encourage a corporate response to the science education crisis. We regard these proposals as one aspect of the total effort needed to resolve the urgent problems faced by higher education institutions. These proposals are uniquely well-suited to bringing private sector resources into play. Since this paper addresses only the necessary role of the federal government in the direct provision of support, we have omitted references to these tax incentive proposals.

This proposal is submitted on behalf of the following organizations:

American Association of Colleges for Teacher Education
American Association of Community and Junior Colleges
American Association of State Colleges and Universities
American Council on Education
American Educational Research Association
Association of Affiliated College and University Offices
Association of American Colleges
Association of American Universities
Association of Catholic Colleges and Universities
Association of Jesuit Colleges and Universities
Association of Urban Universities
California State University
Council of Graduate Schools in the United States
Council of Independent Colleges
National Association for Equal Opportunity in Higher Education
National Association of College and University Business Officers
National Association of Independent Colleges and Universities
National Association of Schools and Colleges of the United Methodist Church
National Association of State Universities and Land-Grant Colleges
State University of New York

STATEMENT OF THE ASSOCIATION OF AMERICAN UNIVERSITIES, ASSOCIATION OF GRADUATE SCHOOLS, AMERICAN COUNCIL ON EDUCATION, NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

These associations are pleased to present this statement in support of the FY 1984 budget request of the National Science Foundation. The members of the Association of American Universities, the American Council on Education, the Association of Graduate Schools, the Council of Graduate Schools in the United States, and the National Association of State Universities and Land-Grant Colleges are the universities and colleges which carry out essentially all of the fundamental research and related education programs supported by the Foundation and other federal agencies. This statement first will give our general reaction to the Foundation's requests and then place them in the context of the present condition and needs of the nation's research and graduate education enterprise.

GENERAL COMMENTS

At the outset we wish to emphasize that the FY 1984 budget request for the National Science Foundation is a strong step in the right direction. After a period of prolonged erosion in the research base of the nation, we are beginning to see, at least in selected areas, the kind of national commitment to excellence in basic science and graduate education that we believe to be absolutely essential to the long-term economic vitality, security, and well-being of our people. Government-wide, much remains to be done to strengthen our investment in science and related education programs, but here, in the FY 1984 budget request for NSF, we see an excellent first step. We particularly commend the Foundation for the strong commitments proposed this year for most basic research programs in the sciences and engineering. We note, however, the weakened position of the social and economic sciences, which remain budgeted below FY 1981 actual levels. The initiatives proposed to strengthen opportunities for young faculty, to renew the graduate fellowship programs, and to substantially increase the Foundation's investment in research instrumentation all deserve the support of the scientific community and, we hope, the support of the Congress. The merits of the proposed initiatives are best assessed in the context of the vitality of university research and education programs, of their unique contributions to the nation and to the national investment that is required in the programs carried out in the laboratories of our universities.

THE CONTEXT

A nation that seems to grow more complex and risky turns to our graduate schools for the continuing supply of talented individuals with the knowledge, technical skills, and perception on which depend our national security, our economic vitality, and cultural well-being. Without the well-educated men and women produced by our graduate and professional schools, we would be unable to sustain our economy, ensure our defense or hold our position of international leadership.

In a recent editorial in Science magazine, Philip H. Abelson wrote (and I quote):

> "We still lead in science, but our position is eroding. Unless a turnaround occurs soon in all levels of science education, we are headed for long-term inferiority."

We concur with this position, and assert further that if we as a nation fail to take specific targeted actions to improve graduate education and research training opportunities, we shall become a country of "less-developed scientists." Who will lead the world in creating and developing alternative energy sources, change the style of agriculture to slow soil erosion at home and around the globe, and exploit the opportunities of the revolution in the biology based on recombinant DNA? Without an infrastructure of strong graduate education, state-of-the-art instrumentation and scientific facilities, and the economic incentives for young scientists to pursue their careers in our universities and execute first-class research, we run the risk of depending on more-developed scientists in other nations of the world for our economic, social, and cultural well-being as we close out this century and move into the frontiers of the 22nd century. National funding and policy are essential to sustain this infrastructure.

Assuring a continuing infusion into our society of such talent is clearly a vital national interest. It stands as the major purpose and justification for the federal government's continuing attention to the health of graduate education and to the need for sustained investment in academic science.

A simple and clear prescription can serve as a guide to national policy with respect to graduate education. It is this: attend to the education and training of the nation's best minds or fall behind those nations that do.

But for a decade or more, as a nation we have departed from this prescription, and now the costs are beginning to be counted. Successive national administrations of both parties, confronted with real economic problems and the need to reduce federal expenditures, have yielded too easily to the half-truth and the seductive notion that freely operating labor markets, unaided by external stimulus or correction, will produce the optimum number of highly trained, first-class people, distributed as needed throughout society.

Now, we see differently. There is ample evidence that the nation cannot presume the availability of a sufficient cadre of highly trained and talented scientists and scholars unless national policy provides incentives adequate to bring about that result. For fifteen years, federal support for graduate education has been reduced substantially. The national level of excellence in graduate education, especially in the context of sharply increasing international competition, has declined to the point that critical national needs served by graduate education are going unmet.

The quality of the environment for academic science and graduate education has suffered prolonged erosion. Today many of our leading graduate schools are seeing graduate enrollments tumble as undergraduate students clamor for the limited spaces available in our schools of engineering and computer science. The quality of instruction is being threatened. Faculty are strained to meet the demand, often without adequate assistance. More worrisome is the awareness that the ranks of truly talented young faculty coming along behind them are thinning. Time to pursue research frequently is squeezed, and the questions researchers are able to pursue in their investigations often are circumscribed by the obsolete instruments available to them. The capacity of faculty to substitute ingenuity for modern research tools is diminishing in many laboratories. In addition, many laboratories are aged; they require modernization if they are to serve through the decade as effective sites for the conduct of modern research. But, despite all of this, it is true that excellent research and quality education programs do continue in many laboratories. Many of those closest to the scene know, however, that increasingly serious problems do plague our research enterprise, problems that left unaddressed will compromise our future.

Essentially all of our national policy objectives depend heavily on graduate education, both for highly trained personnel and for advances in scientific and technical knowledge that sustain our economy and ensure our defense. The present Administration has charted a course that requires significant real increases in total support for research and development, most notably in the area of national defense. The Department of Defense has proposed to increase its investment in university research programs, to initiate a small new program of graduate fellowships designed to attract a few of the most able undergraduates into graduate programs in fields linked to our national security needs, and it is undertaking a new 5-year, $150 million program to upgrade research instrumentation in laboratories that carry out research programs in areas related to our defense needs.

The FY 1984 budget request for the National Science Foundation provides significant real and most welcome increases in the Foundation's physical sciences and engineering programs. After almost a decade of neglect, steps to strengthen the NSF graduate fellowship programs also are proposed. Targeted attention also is being proposed to assist young researchers, who, with some encouragement at a crucial point in their careers, will pursue careers in academic science. But as welcome and important as these steps are, they are truly only the first steps we as a nation must take toward a more comprehensive, government-wide investment strategy for strength in the underpinnings for basic science and excellence in graduate education.

As we consider our future it always is good to reflect on the nation's history. It was the sudden dependence on university-based science and scientists during World War II that led to a major emphasis on federal support for university programs of research and graduate training. The successful launching of Sputnik produced a new surge of federal interest in research and advanced education as components of a national effort to regain and sustain American scientific and technological superiority.

Beginning in the 1950s, by a variety of direct and indirect means, the federal commitment to excellence in higher education and research was developed. A tapestry of federal and private programs contributed to strengthening our research and graduate enterprise. At its peak, the commitment to graduate education included not only the National Science Foundation but the major mission agencies as well. The contributions by the Department of Defense and NASA to the health of graduate education are well known to the Congress and to this Committee in particular. The leadership provided by this Committee made many of these earlier investments possible. But although the federal government remains today a substantial patron for science, its investment in core programs designed to strengthen graduate education and contribute to the research and education environment in universities has diminished almost to the vanishing point in crucial areas. Four areas appropriate for consideration in the context of the FY 1984 NSF budget request are: graduate student support, the need to enhance career prospects for young faculty, research instrumentation, and research facilities needs.

GRADUATE EDUCATION

The existing matrix of federal programs providing graduate student support is the remnant of a clear recognition by the federal government in the past of the importance to the nation of strong graduate education programs. Many talented students have pursued advanced education in a wide range of academic specialties simply because federal assistance in many forms made it possible.

The modest yet perceptible increase in the availability of fellowships based upon merit and demonstrated academic excellence is an important step in the right direction. We must accelerate this program, for we have lost much ground evidenced by many recent developments. For example, for the first time in our history, 50% of the Ph.D's awarded in electrical engineering this year will be to persons who are not citizens of this country, most of whom have received financial support from their own government to pursue graduate studies. In addition, many young persons in this country with a new B.S. in computer science are demonstrating with their feet that they see more economic sense in taking that $30,000 job offer than opting for two to five years in graduate school with a fellowship stipend of $7,000 per year and perhaps accumulated debt of $8,000 to $10,000 over the period. In addition, proposed changes that would make graduate student participation in the Guaranteed Student Loan Program more onerous must be turned aside and compensated for by targeted fellowship programs based upon merit and the pursuit of excellence.

Federally funded fellowships were a clear success and an important, even determining, factor in the careers of numerous researchers who now are faculty in our leading institutions. The number of federally funded fellowships has declined precipitously, from 51,000 in 1968 to fewer than 10,000 today; of these only about 1,500 are awarded to students pursuing advanced study in the sciences and engineering; fewer than 500 of these are awarded annually by the NSF.

The new graduate fellowship program implemented this year by the Office of Naval Research offers a good model for the future development of the NSF fellowship program. It offers stipends of $12,000 and cost-of-education payments of $8,000 to institutions selected by students. These award levels recognize the demands of the marketplace of the 1980s and the present costs of graduate education in the sciences and engineering. An even stronger, more balanced approach would provide for a modest supplemental program, funded steady-state at perhaps half the program of individual awards, which would provide awards made to students through institutions that carry out NSF-funded basic research programs. Such balance between proven approaches is mutually reinforcing; and, for a relatively small incremental investment, it would have a substantial beneficial impact on the health of science and engineering departments that carry out energy-related research.

YOUNG FACULTY

Closely linked to the needs of graduate students are the increasingly serious challenges that face young researchers who seek to begin careers in basic science. As young Ph.D.'s complete their formal training those who aspire to academic careers face hurdles more serious than those their faculty mentors encountered. The attractiveness of an academic career is diminished and the prospects for a successful start need enhancing.

The 1980 AAU report to NSF, "The Scientific Instrumentation Needs of Research Universities," provides a striking example of the increased costs young researchers face as they seek to establish their research programs (see table on following page). The

TABLE 4. Increased Start-up Costs for Frontier Research (Synthetic Organic Chemistry)

1970 Instrument	Cost	1979 Instrument	Cost
Laboratory Instrumentation			
Rinco evaporator - 2	$ 300	Rotavac evaporators	$ 1,700
2 vacuum pumps	400	Prep. liquid chromatograph with fraction collector	7,200
Distillation apparatus—spinning band	825	Analytical liquid chromatograph with recorder and data system shared with capillary column	13,250
Solvent stills - 3	600	Gas chromatograph	11,300
Melting point apparatus	150	Solvent stills with fire safety hoods	4,500
Gas chromatograph and recorder	1,450	Hot plates, stirrers, and heating mantles	600
Hot plates and stirrers, heating mantles	275	Microware with standard taper joints	3,000
Glassware	500	Laboratory glassware	800
Infracord Infrared Spectrometer	3,500	Thin layer chromatographic plates and tanks	1,500
TOTALS:	$ 8,000		$ 43,850
Departmental Equipment to Which Access Required			
A-60 NMR Spectrometer	$40,000	90 mhz R-32 NMR spectrometer	$ 52,000
Cary 14 UV-Visible Spectrometer	14,000	200 mhz wide bore NMR spectrometer	225,000
Hitachi RMU-6 Mass Spectrometer	60,000	CFT-20 ^{13}C NMR spectrometer	80,000
Precision refractometer	2,500	GC-mass spectrometer and data system - Finnigan 4000	160,000
		Cary 17 - UV, Vis, Near IR spectrometer	32,000
		Digilab FT-IR spectrometer	82,000
		High resolution mass spectrometer - CEC - 21 - 110	110,000
TOTALS:	$116,500		$741,000

data now are somewhat dated, so the message they convey should be interpreted as a conservative estimate of present costs. In the case of a leading chemistry department the costs associated with equipping a new faculty member to do up-to-date research in the field of synthetic organic chemistry increased from $116,500 in 1970 to $741,000 in 1979. Inflation accounts only for part of the rising costs. Imposed on the rising baseline of inflation are much larger costs resulting from advances in existing instrumentation and the development of totally new, more powerful, and, therefore, more productive instruments. Young researchers of promise, who are yet without successful track records, cannot meet these costs without substantial assistance from their departments and institutions; and they are increasingly hampered in being able to respond.

Dr. Lattie Coor, President of the University of Vermont recently cited for the Senate Committee on Labor and Human Resources some facts about the University that characterize the conditions for faculty at many of the comprehensive universities across the nation. The second major source of income at his institution arises from sponsored grants and contracts for research and training. Since FY 1980, the number of applications submitted by Vermont faculty has remained fairly constant, as has the ratio of awards to applications. However, the amount of dollars awarded has been decreasing over the period and for the first half of the current Fiscal Year dollars awarded are down 20% against the corresponding period in FY 1982. Overall, the Vermont faculty secure funding for only 60% of the applications submitted, with this figure much lower for young faculty (approximately 40-50%), and are awarded a decreasing amount of funds particularly trying for the young investigator starting up his or her first laboratory. The young faculty at the University of Vermont are committed to the academy, are not discouraged and continue to seek external support for their research, but are very apprehensive about downward instability in federal and NSF funding and suggestions that private sector capital can replace government support for research and training. At Vermont and most other universities, 90% of the funding for research and training arises from the government, so they will continue to turn to agencies like the NSF even while they cultivate private sector support. Probably 90% of the new scientists trained over the next 10 years must be supported by government funds. The question before us is the quality and magnitude of this important component of the scientific infrastructure of this country which shall be supported by governmental funding.

The National Science Foundation proposes a new Presidential Young Investigators Awards program that will provide no more than 200 recent Ph.D.'s with 5-year awards averaging $30,000, to be matched from private sources. The funds will enable these potential new researchers to undertake a research program promptly and to have a genuine opportunity to develop their skills as investigators in their early years. For some it will mean the difference between remaining in the academic environment and leaving to pursue more encouraging and fruitful alternatives. We vigorously support this important new initiative, and believe, if properly implemented, it will make an important contribution toward making the academic science laboratories more attractive career settings for talented young faculty.

RESEARCH INSTRUMENTATION

The third area requiring attention is the need to address the serious problems posed for modern research and quality graduate education by obsolete research tools. The instrumentation and equipment now being used in many of our research and training laboratories are seriously out of date. As previously reported to the Committee, a study completed in 1980 for the National Science Foundation found that the median age of instruments then in use in 15 universities surveyed was twice that of the commercial laboratories studied. That report, and others, were provided to the Committee in earlier hearings; the Executive Summary is attached to my statement for the record.

The University of Vermont is representative of many moderately sized yet strong research universities. The following information provided to us by Dr. Coor typical for many other institutions across our nation. In Fiscal Year 1978, the equipment replacement budget for the entire University of Vermont was $180,000 providing a basis for replacement every 100 years. Through management efforts, the university improved the schedule somewhat so that they now have a continuing base budget affording a 35-year replacement schedule ($506,000 in the base budget for FY 1983). Obviously, this situation remains unacceptable for it means that in a given laboratory a graduate student might be trained using an instrument purchased 15 years ago, and the institution's budget would not allow replacement of that instrument for another 20 years. Further, this does not include acquisition of new and advanced instrumentation. Federal support is needed for the acquisition of state-of-the-art instrumentation, which has grown more sophisticated, costly, and involves multi-users so that instrumentation shortfalls are now no longer confined to one laboratory (as was the case 15 or 20 years ago) but impact a network of laboratories within a given university.

In three years, much has happened. Investment in research instrumentation by some federal agencies has increased significantly. The FY 1984 budget request for the National Science Foundation proposes a significant increase in support for equipment within its research programs. Among the mission agencies, the Department of Defense has recognized the consequences to its basic research effort of leaving the problem unaddressed. DOD this year is proposing the second year of a 5-year, $150 million program to upgrade research instrumentation in laboratories that carry out research programs of interest to the Department. This year the Department of Energy also has joined the effort with a new $6 million university research equipment program. That initiative is an important step for the Department.

An Interagency Task Force on University Research Instrumentation is continuing to explore the problem. Within the university community the AAU, joined by the National Association of State Universities and Land-Grant Colleges and the Council on Governmental Relations of the National Association of College and University Business Officers, hopes soon to undertake a special joint project to explore alternative approaches toward meeting the substantial backlog of obsolete equipment.

The significance of the research instrumentation investments proposed by the NSF is clear in comparison with those of DOD and DOE. The major commitment to modernizing research instrumentation being proposed by the Foundation places NSF in the lead position among all of the major agencies of the federal government. As important as the other steps mentioned above are to the overall effort, they do serve to emphasize the overriding importance of the Foundation's leadership and commitment to this area. We urge your full support for this very significant next step toward rebuilding our research capabilities.

RESEARCH FACILITIES

Turning to our final point, the need also to address the problems associated with deteriorated research laboratories, we find that the Department of Energy in its budget request states the general problem well, at least as it affects certain DOE facilities. In requesting $40 million for the Multiprogram General Purpose Facilities (MGPE), the Department in its budget justification states the following:

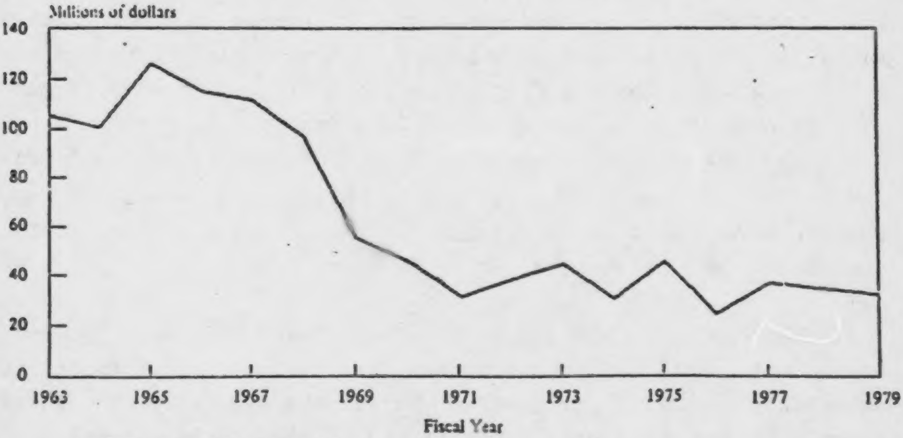
> "The program is based on the premise that through continuous usage and aging, facilities deteriorate over time to a point where they are no longer useful to perform their intended functions and must be rehabilitated or replaced."
>
> Source: FY 1984 DOE budget request, p. 121, 195.

In facing the serious problems of the DOE multiprogram laboratories, the Department is addressing the same problems spawned by obsolete facilities faced by many university researchers who seek to carry out NSF and other federally supported research programs in outdated laboratory buildings. The need to replace, renovate, rehabilitate, and reequip old research laboratories is the other half of the research equipment problem.

In many ways the equipment and facilities problems are intertwined. But, as a 1981 AAU survey of research facility needs, also earlier provided to the Committee, points out, our leading research universities have substantial backlogs of research facilities in need of replacement, or at least modernization, if they are to be suitable sites for the conduct of state-of-the-art DOE-funded research programs. (The Executive Summary from that report also is attached to this statement.)

As shown by the following figure, for more than 15 years the federal government has invested essentially no funds to assist institutions in the replacement and repair of those laboratories in which the nation's basic science programs are conducted.

Figure 1. Federal obligations to universities and colleges for R&D plant



SOURCE: National Science Foundation

Many of these buildings were constructed 25 or more years ago in response to a national mandate; now many of those facilities need the same attention required by government-owned facilities--but for many financially pressed institutions the resources to do this job simply are not available. Since the alternative is the progressive deterioration of research laboratories essential to the nation's research base, and further deterioration in the quality of the science and education programs carried out in them, we believe it is time for the National Science Foundation, and the other leading agencies of the federal government that fund the nation's basic science programs, to assist in the rehabilitation of those laboratories essential to each agency's research mission and goals.

In the case of the National Science Foundation we ask the Committee to consider establishing a program to rehabilitate NSF-funded university laboratories at an initial level of $75 million.

CONCLUSION

We are hearing much these days about the potential to meet the nation's needs for research and highly trained people by forging closer ties between universities and industry. There are important opportunities, it is true, to strengthen those ties in ways that will result in greater investments by industry in university research and education programs. After looking at the current scene with some care, however, we can only conclude that the long-range potential here is probably considerably less that many would hope for. While much attention is being given to a relatively small number of potentially significant and highly publicized cooperative arrangements, it is good to remember that there is little here that genuinely is new. What is new is the intense interest focused on a few especially promising areas, particularly in the computer and life sciences. For many other fields, little has changed. For most, sustained national investment in basic science, funded through the agencies of our federal government, must continue to be the primary, even sole, source of research support.

The FY 1984 budget request of the National Science Foundation sustains and strengthens the nation's commitment to university research programs. We ask the Committee to fully support the Foundation's requests and to give serious consideration to building upon them along the lines suggested here.

Scientific Instrumentation Needs of Research Universities—Executive Summary

OBJECTIVES OF THE STUDY

- assess the current status of scientific instrumentation in major research universities
- identify factors which facilitate or impede its development, acquisition, use, and maintenance
- estimate the future consequences of present funding policies
- recommend appropriate policy changes

METHODOLOGY

- sixteen universities, six national and government laboratories, and nine commercial laboratories were visited; about 80 department heads and over 250 researchers and research administrators were interviewed in the universities; in addition, the views of approximately 60 researchers and research managers were gathered in visits to national, government, and commercial laboratories
- five fields of science and engineering were studied: physics, chemistry, biological sciences, earth sciences, and electrical engineering
- numerical data on instrumentation acquisition, age, and replacement were gathered from 14 universities and four commercial laboratories

THE PROBLEM

Instrumentation is essential for progress in experimental research. Scientific knowledge has advanced rapidly; new instruments, more costly but qualitatively superior to earlier ones, have allowed measurements previously impossible. The rate of change has been great, competition among researchers intense. The capacity of university researchers to work at the frontiers of knowledge has important consequences for the nation's future research productivity and for the training of future generations of scientists and engineers.

The federal government has adopted a variety of funding policies for the support of research instrumentation: the competitive project system, special instrumentation programs, formula grant programs, block-funded centers, federally sponsored research centers, and regional instrumentation centers chief among them. For about 15 years, federal support for basic research has gradually declined; now support levels are further strained by rapid inflation. But inflationary price increases are simply the rising baseline upon which are superimposed the frequently much larger increases resulting from instrumentation advances.

ASSESSMENT

The great diversity of instrumentation needs found among institutions visited precludes simple generalizations. However, problems in the acquisition, use, and maintenance of research instrumentation were found in all of the leading universities visited. The precise configuration of these needs and problems varies widely. The capabilities of institutions and departments to meet them do also.

University researchers face great difficulty in replacing worn-out or obsolete instrumentation and in acquiring new instruments needed for frontier research. A comparison of university instrumentation inventories with those of two leading commercial laboratories reveals that the median age of university equipment is *twice* that of the commercial laboratories' instrumentation. Even the nation's major research universities have not kept pace in meeting instrumentation needs. Researchers heavily dependent upon federal funds have witnessed grant size fall behind escalating research requirements. As a result, many work with inadequate tools that impair the pace of research, force closure of lines of inquiry, strain operations and maintenance budgets, and compromise the advanced education of graduate students.

Start-up funds for new faculty often are shrinking as costs rise. Support equipment is needed to test, calibrate, and augment primary instruments. Often it is especially difficult to fund. Funding for operation and maintenance costs is increasingly difficult to obtain. As a result, faculty and students sacrifice research time to these routine tasks.

Many research facilities are in need of renovation or replacement; federal funding for these purposes has decreased, however, and universities lack the funds to respond. Signs that aging facilities now impede research were found in many laboratories and support facilities.

Local university needs vary widely, reflecting the unique circumstances under which each institution operates and the great diversity between and even within the five fields studied. Present funding policies do not provide sufficient flexibility to deal with such local circumstances.

When compared with government and commercial laboratories visited, most university laboratories fare poorly. The best-equipped industrial laboratories surpass almost all university laboratories visited. One university researcher captured the sense of disparity and observed, "the ivory towers are now in industry." The director of one leading industrial research laboratory described the struggle of university researchers as he has observed them as "pathetic." When asked to contrast their laboratories with foreign laboratories, a number of university researchers stated that many, most notably those in Japan and West Germany, are now superior.

CONCLUSION

The quality of research instrumentation in major university laboratories has seriously eroded. Not all, but many researchers in the nation's best-funded universities are struggling to work effectively with obsolete tools. The equipment being used in the top-ranked universities has a median age twice that of the instrumentation available to leading industrial research laboratories.

Three *causes* are identified:

- a relative decrease in instrumentation support
- inflexibility within the project system
- insufficient support for maintenance

Three major *consequences* are:

- diminished research productivity
- reduced training capacity
- decline in international competitive status

RECOMMENDATIONS

Federal policy for the support of research instrumentation should provide for a basic three-part funding strategy:

- strengthen instrumentation funding in the project system
- expand special instrumentation programs
- create in the National Science Foundation a new, supplemental formula grant program to provide needed flexibility to meet diverse institutional needs

FUTURE STUDIES

Five studies are recommended: 1) a thorough analysis of foreign research funding policies and programs and their implications for the competitive stature of American science should be undertaken; 2) a study of cooperative research arrangements between industries and universities and the factors—including federal policies—that encourage and discourage them is needed; 3) the planned assessment of regional instrumentation centers should include consideration of the concerns documented in this report; 4) universities should assess current instrumentation policies and develop mechanisms and incentives designed to promote effective sharing of instrumentation; 5) an assessment of the costs and benefits of federally-mandated equipment inventory and reporting systems should be undertaken.

NATION'S DETERIORATING UNIVERSITY RESEARCH FACILITIES BY ASSOCIATION OF AMERICAN UNIVERSITIES

A SURVEY OF RECENT EXPENDITURES AND PROJECTED NEEDS IN 15 UNIVERSITIES—JULY 1981

EXECUTIVE SUMMARY

OBJECTIVES OF THE SURVEY

This survey of 15 leading universities had three objectives:

-- In the institutions surveyed, document expenditures for research facilities and major ($100,000 or more) equipment, without regard to source of funds, over the last four years in the following six fields:

- Biological Sciences
- Chemical Sciences
- Earth Sciences
- Engineering
- Physics
- Medical Schools (10)

-- Provide responsible estimates, prepared by those universities, of expenditures for research facilities and major equipment that would be required over the next 3 years to meet the research and training needs of only current faculty.

-- From researchers and department heads, acquire assessments of the major consequences for science, industry, and government if the accumulating facilities needs of their institutions are not addressed.

FINDINGS

In many of the science and engineering departments surveyed, a substantial backlog of research facilities and equipment needs is accumulating. Projected funding needs over the next three years equal almost twice the level of expenditures by universities for their research laboratories and equipment over the past four years. Already, institutions often are unable to provide their basic science and engineering researchers and students with either the modern laboratories or equipment needed to conduct state-of-the-art research and education programs.

The loss of federal contributions to the support of research facilities and the absence of compensatory sources of support has forced many institutions to renovate and repair only those facilities in greatest need. Even this work often is carried out in a necessarily piecemeal fashion which is uneconomical over the long term. Working under such conditions, researchers unavoidably compromise their productivity and future competitiveness.

Relatively few construction projects have been completed in recent years in a majority of the physical sciences and engineering departments surveyed. Many institutions estimate substantial needs for new laboratories, for the expanded modernization and repair of old laboratories and for modern research equipment. Details are provided in the following report and the appendicies. The survey's principal findings are the following:

- In the last four years, for the six fields surveyed, fifteen leading universities together spent $400 million from all sources for facilities and major equipment. Half of those expenditures was for a relatively small number of new construction projects; the remaining half, spread over a larger number of generally less costly funding projects, was for facility modernization, major repair and renovation, and special purpose research equipment.

- In the next three years, the 15 universities estimate they should spend almost twice as much ($765 million) just to provide the necessary research facilities and special research equipment for current faculty only. These estimates are in current dollars and, therefore, do not include the added effects of inflation.

- New construction to replace outmoded facilities accounts for almost 60% of total projected funding requirements across all fields.

- In addition, substantial needs for major research equipment were identified in all six fields. These equipment estimates include only major items costing at least $100,000. As the 1980 AAU report to the National Science Foundation found, most departments also have serious deficiencies of less costly analytical instrumentation and support equipment.

RECOMMENDATIONS

The problems of obsolescence in the nation's university research facilities have been growing for more than a decade. To solve them, a new national investment strategy is needed. That strategy should provide direct, balanced support for university facilities from federal agencies and provide investment incentives designed to involve industry, the states, and the universities in a coordinated effort. The following steps are suggested as starting points:

1. Key Executive agencies should develop a mechanism to periodically assess the condition of university research laboratories and the consequences for the nation of that condition. Such assessments should involve the Office of Science and Technology Policy, the National Science Foundation, the Department of Defense, the Department of Energy, the Department of Health and Human Services, the Department of Agriculture and the National Aeronautics and Space Administration. The views of industry and the universities also should be solicited.

If the initial review corroborates the assessment of this suvey the following recommendations should be considered:

2. The facilities and equipment program earlier proposed to be undertaken by the National Science Foundation but deferred should be restored as a priority initiative in FY 1983.

3. The Department of Defense, Department of Energy, the National Aeronautics and Space Administration, the Department of Health and Human Services, and the Department of Agriculture should establish research instrumentation and facilities rehabilitation programs targeted on the fields of science and engineering of primary significance to their missions. The National Science Foundation should assist in the development, implementation, and coordination of those activities.

4. Incentives should be provided to encourage industries and the states to join with universities and the federal government in renewing the nation's university research laboratories.

5. Interest costs incurred in the construction, modernization, renovation, and repair of facilities in which federally supported research programs are carried out should be allowable indirect costs under OMB Circular A-21.

STATEMENT OF NICHOLAS G. BKOR, ASSOCIATE PROFESSOR OF MATERIALS SCIENCE AND ENGINEERING, OREGON GRADUATE CENTER

During the past few months there has been considerable discussion and recognition that we face a crisis in math and science education. The crisis extends from precollege through college and is manifest in the critical shortage of practicing scientists and engineers. The Administration and Congress have focused on these needs at the precollege level and there are pending bills to address this need. The Administration, however, has not extended this concern for math and science education to the college level. The National Science Foundation has been and will be directed to apply its previously zero budgeted educational expertise to administer and develop programs in precollege math and science education. NSF does not have the mandate, however, to extend this expertise to the college level.

Testimony from four of the national technical societies before the Senate Committee on Labor and Human Resources detailed the need of upgrading college teaching in math and science. A majority of our precollege teachers as well as practicing professional scientists and engineers came through the two-year junior college and smaller four-year (nonuniversity) colleges. It is imperative that some effort be expended to provide programs to enhance the math and science teaching of these critical nonuniversity college teachers. Special programs are required to bring the cutting edge of science and math to these nonresearch teaching faculty.

The National Science Foundation has sponsored an effective national program to address this critical upgrading of college math and science teachers. The NSF Chautauqua Short Courses for College Teachers have been conducted by the American Association for the Advancement of Science and a dozen Regional Field Centers. This program was initially funded at a level of ~$1,000,000 and was conducted at fourteen Regional Field Centers. Inflation without an increase in funding level resulted in a reduction from fourteen to twelve Regional Field Centers. Further reduction in funding by OMB resulted in the elimination of participant support and a 50% reduction in the number of courses offered. Throughout this program the total cost per participant has been maintained at ~$300. Initially ~3,000 college faculty were able to participate in the program annually while for budgetary reasons the number has been ~1,500 annually the past two years.

The courses and course directors are selected by the American Association for the Advancement of Science in consultation with the Field Center Coordinators. This selection procedure ensures that the program provides expertise at the cutting edge of math and science. The AAAS then arranges the program based on the Chautauqua concept wherein the same short course is offered by the course director at more than one Regional Field Center. Traditionally the format has been based upon a split session with two days in the fall and two days in the spring. The intervening period between the fall and spring sessions is used by the participants to complete an interim project. The budget reduction has resulted in a less costly single three-day format for many of the courses during the past two years as well as the use of special laboratory sites for several of the courses.

The current twelve Regional Field Centers are located at the Oregon Graduate Center, Santa Ana College in California, University of Utah, and University of Texas at Austin for the Western Circuit; University of Iowa, Parkland College in Illinois, University of Dayton in Ohio and Christian Brothers College in Tennessee for the Central Circuit; and the University of Georgia, Temple University in Pennsylvnia, Polytechnic Institute of New York and Hampshire College in Massachusetts for the Eastern Circuit.

The success and effectiveness of this innovative program can be attested to on several counts:

1) The cost per college faculty participant has been ~$300. For the past two years the total annual cost of the NSF Short Course program has been ~$500,000 which reached ~1,500 college faculty annually. This total annual budget is equivalent to the proposed FY83 NSF precollege teacher awards to 100 teachers. These awards are to be presented in a rose garden ceremony and will include a $5,000 award.

2) The Chautauqua Short Courses continue to be oversubscribed even without participant financial support.

3) Contributions to keep the program alive by course directors providing courses and materials without reimbursement.

4) Contributions by the Regional Field Centers to enable the program to continue the past two years.

5) Contributions by special laboratory sites in conducting specific courses.

Math and science education would not be well served if the modest and very cost effective NSF Chautauqua Type Short Course Program were allowed to lapse. This very innovative and successful national program in math and science education can continue to reach thousands of college teachers annually if the Senate Committee on Appropriations acts in time.

STATEMENT OF DR. STEVE KAHNE, SPEAKING ON BEHALF OF THE RESEARCH AND DEVELOPMENT COMMITTEE, U.S. ACTIVITIES BOARD, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

ACCOMPANIED BY THEODORE SIMPSON, INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Senator GARN. Next, Dr. Steve Kahne and Theodore Simpson, vice president, R&D committee, Institute of Electrical and Electronic Engineers, Inc.

Dr. KAHNE. Senator Garn, good morning. I am Stephen Kahne, president, Western University in Cleveland. I am speaking today on behalf of the Research and Development Committee of the U.S. Activities Board of the Institute of Electrical and Electronics Engineers; we call it IEEE.

The institute was founded in 1884 and it is the world's largest technical society with 250,000 members worldwide. The U.S. Activities Board represents the 190,000 members who reside in the United States.

We in the IEEE are pleased to note a growing recognition by the Congress and the administration of the unique role that government plays in the area of fundamental research. The consequent growth in the NSF budget that has occurred over the past 2 years has included substantial increases for engineeting research which we heartily endorse. At this time of widespread concern over the economic health of our Nation and the vital role that high technology will play in opening up new industries and job opportunities, we must not shortchange the engineering disciplines. It is engineering and engineering research that will provide the critical linkages between discoveries in the laboratory and products and services in the marketplace.

However, over the course of the 1970's there was a very real decline in the quality of engineering education in the United States. The problems of engineering education can be attributed to at least three circumstances: First, there is a shortage of engineering faculty in which over 1,600 positions, approximately 9 percent of those authorized and budgeted for, are vacant. In selected areas such as solid state electronics and computer designs, the vacancy rate is much higher, while in some areas, like in civil engineering, it is much lower.

Second, engineering student/teacher ratios have changed substantially since the 1968–69 academic year, with the average undergraduate teacher responsible for over 25 percent more students by 1980–81 than 1968 or 1969.

The soon-to-be-released fall 1982 survey of engineering faculty and graduate students conducted by the engineering college faculty-shortage project indicates that in order to regain the engineering student/faculty ratios of the 1968–1969 academic year, about 3,900 new engineering faculty members would be needed.

Third, obsolescence has overtaken much of our university laboratory equipment. Studies have estimated the cost of updating this equipment to the state of the art at between $1 billion and $2 billion. Clearly, these conditions do not bode well for our National Foundation for Engineering Education.

In addition to the quality of engineering education in the United States, another problem is the continued decline of U.S. citizens in engineering Ph. D. programs. The American Society for Engineering Education reports that the engineering Ph. D. production declined from 3,800 in 1972 to 2,800 in 1981, and that approximately 1,000 of these 2,800 1981 graduates are foreign nationals.

To address those problems, Mr. Chairman, we strongly support the appropriation of the full amount authorized for the Engineering Directorate of NSF for 1984. We are concerned about efforts to dilute this funding with other programmatic responsibilities. We believe that responsibility for the scientific, technological, and international affairs (STIA) program should be left with that Directorate, even at the expense of $2 million originally requested for Engineering Directorate management of these programs.

Under the auspices of STIA is a new initiative which we would also like to support. The Presidential Young Investigators Research Awards, which is proposed to receive $6 million, would fund up to 200 5-year research awards for recently graduated faculty members. The awards would amount up to $100,000 per year and the program would rely on matching contributions from the private sector.

This new program of encouragement for young investigators will contribute to an improved climate for engineering faculty and should be supported. However, only half of these awards are slated for engineering, a small but welcome step toward the resolution of the faculty shortage problem.

We support appropriations of the full $6 million for this program. Under the President's original request, $39 million was proposed for science and engineering education. Of this amount, $19 million would be directed toward graduate research fellowships, raising the stipend and cost-of-education allowance to approximately 1,390 fellows. We believe this is an important step in increasing engineering Ph. D. enrollments by U.S. nationals, as we understand these benefits are available only to U.S. citizens.

We, therefore, urge appropriation of the full $19 million requested for the graduate research fellowships under the NSF science and engineering education activities.

Finally, the House Science and Technology Committee has recommended a $50 million increase for research instrumentation. In the engineering areas, this is a badly needed element in the process of encouraging faculty retention and in improving the relevance of university engineering research and teaching to the state of industrial practices. This upgrade of university research tools also is important to the overall effort to improve engineering faculty retention.

We support the addition of $50 million for this purpose above the amount originally requested for 1984. Overall, we strongly support the directions for NSF that are represented in the fiscal year 1984 budget request. These are important directions for the scientific and technical strength of the Nation. They are but a beginning, however, and will need to be sustained and expanded in future years.

[The statement follows:]

Statement of Dr. Russell C. Drew, on Behalf of the Research and Development Committee, U.S. Activities Board of the Institute of Electrical and Electronics Engineers, Inc.

Mr. Chairman, my name is Dr. Russell C. Drew, and I am speaking today on behalf of the Research and Development Committee of the U.S. Activities Board of the Institute of Electrical and Electronics Engineers, Inc. (IEEE). The Institute was founded in 1884, and it is the world's largest technical society with 230,000 members worldwide. The U.S. Activities Board represents the 190,000 members who reside in the United States.

FY 1984 NSF BUDGET

We in the IEEE have been particularly pleased to note a growing recognition by the Congress and the Administration of the unique role that Government plays in the area of fundamental research. The consequent growth in the NSF budget that has occurred over the past two years has included substantial increases for engineering research which we heartily endorse.

At this time of wide spread concern over the economic health of our nation, and the vital role that high technology will play in opening up new industries and job opportunities, we must not short-change the engineering disciplines. It is engineering and engineering research that will provide the critical linkages between discoveries in the laboratory and products and services in the marketplace.

However, over the course of the 1970's there was a very real decline in the quality of engineering education in the United States. The problems of engineering education can be attributed to at least three circumstances. First, there is a shortage of engineering faculty, in which over 1,600 positions, approximately 9% of those authorized and budgeted for, are vacant.[1]
Second, engineering student/teacher ratios have changed substantially since the 1968-69 academic year, with the average undergraduate teacher responsible for over 25% more students by the 1980-81 academic year. The soon to be released Fall 82 Survey of Engineering Faculty and Graduate Students, conducted by the Engineering College Faculty Shortage Project, indicates that in order to regain the engineering Student/Faculty ratios of the 1968-69 Academic year, about 3,900 new engineering faculty members will be needed.[2] Third, obsolescence has over-

taken much of our university laboratory equipment. Studies have estimated the cost of updating this equipment to state-of-the-art at between $1 and $2 billion.[3] Clearly these conditions do not forebode well for our national foundation for engineering education.

In addition to the quality of engineering education in the U.S., another problem is the continued decline of U.S. citizens in Engineering Ph.D programs. The American Society for Engineering Education reports that Engineering Ph.D production declined from 3,800 in 1972 to 2,800 in 1981, and that approximately 1,000 of these 2,800 1981 graduates are foreign nationals.[4]

To address these problems, Mr. Chairman, we strongly support the appropriation of the full amount authorized for the Engineering Directorate for 1984. We are concerned about efforts to dilute this funding with other programmatic responsibilities. We believe that responsibility for the Scientific, Technological and International Affairs (STIA) programs should be left with that Directorate, even at the expense of $ 2 million originally requested for Engineering Directorate management of these programs.

Under the auspices of STIA is a new initiative which we would also like to support. The Presidential Young Investigators Research Awards, which is proposed to receive $ 6.0 Million, would fund up to 200 five year research awards for recently graduated faculty members. The awards would amount up to $ 100,000 per year, and the program would rely on matching contributions from the private sector. This new program of encouragement for young investigators will contribute to an improved climate for engineering faculty, and should be supported. However, only half of these awards are slated for engineering -- a small but welcome step toward resolution of the faculty shortage problem.

We support appropriations of the full $6.0 million for this program.

Under the President's original request, $ 39.0 million was proposed for Science and Engineering Education. Of this amount, $ 19.0 million would be directed toward Graduate Research Fellowships, raising the stipend and cost-of-education allowance to approximately 1,390 graduate fellows. We believe this is an important step in increasing engineering Ph.D enrollments, by U.S. Nationals, as we understand these benefits are available only to U.S. citizens.

We therefore urge appropriation of the full $ 19.0 million requested for Graduate Research Fellowships under the NSF's Science and Engineering Education activities.

Finally, the House Science and Technology Committee has recommended a $50 million increase for research instrumentation. In the engineering areas, this is a badly needed element in the process of encouraging faculty retention and in improving the relevance of University engineering research and teaching to the state of industrial practice. This upgrade of University research tools also is important to the overall effort to improve engineering faculty retention.

We support the addition of $50 million for this purpose above the amount orginally requested for FY 1984.

Overall, we strongly support the directions for NSF that are represented in the FY 1984 budget request. These are important directions for the scientific and technical strength of the nation. They are but a beginning, however, and will need to be sustained and expanded in future years.

Mr. Chairman, with me today is Theodore R. Simpson, the Vice Chairman of the IEEE Research and Development Committee. Mr. Simpson would now like to provide a few brief comments on the National Aeronautics and Space Administration budget request for FY 1984.

FY 1984 NASA BUDGET

Thank you Mr. Chairman.

If one neglects for a moment the overall size of the NASA budget for FY 1984, a subject I will discuss later, then the budget has much to recommend it - particularly in space science and applications, space transportation, and aeronautics.

In the space science portion of its budget, NASA has its first major planetary mission since the beginning of the Carter Administration six years ago. The Venus Radar Mapper (VRM) mission, which would cost about half the amount needed for the previously desired VOIR mission, marks the recommitment of the United States to the exploration of the solar system. We support this mission, and the continuing work of the Solar System Exploration Committee (SSEC) to fashion a series of relatively low cost planetary missions for the 1990s. The work that the SSEC is doing is valuable, and their suggestion that the annual funding for NASA's Planetary program be raised from $200 million to $300 million appears to us to be quite reasonable. This funding will be needed during the 1980's to support a core planetary program which would include the following missions: a Mars Geoscience/Climatology Orbiter, a Titan Probe/Radar Mapper, and a Comet Rendezvous/Asteroid Flyby.

We also support NASA's program to explore the universe beyond the solar system, and we are looking forward to the scientific knowledge to be obtained from the Space Telescope. Due to the recently announced cost overruns of $200 million or more, and a schedule delay of 12 to 18 months, we believe that Congress should add some funds in this area to minimize the schedule slippage and the impact of this cost increase on other space science projects. Reprogramming $20-40 million in the FY 1983 budget and adding $40-80 million in the FY 1984 budget for this purpose appears to us to be a reasonable approach.

In the space applications portion of the budget, we are delighted that Congress added funding last year to start the Advanced Communications Technology Satellite (ACTS). This was our highest priority item in our testimony last year on the FY 1983 NASA budget. We believed then, and still do, that it is important to maintain our preeminence in communications satellites - the only successful commercial area in space so far.

In space transportation, the recent successful first flight of the shuttle orbiter Challenger marks another milestone for the space shuttle. So far, we have had four successful test flights and two successful operational flights. We support the shuttle wholeheartedly and believe that work must continue to make it a truly operational vehicle - the turnaround time has to be reduced, and the cost per flight lowered, two interrelated tasks. Given time, we believe that this can be accomplished. We also support the construction of a fifth shuttle orbiter as a backup vehicle. This is becoming increasingly important as the U.S. phases out its expendable launch vehicle capability.

Besides its ability to transport large payloads to low earth orbit, several hundred miles above the earth's surface, the shuttle also provides us with the capability to transport a crew of 7 astronauts into space. We thus have the capability to determine the value of man in space. This is important, for although the United States has extensive experience with unmanned space systems, its manned space flight experience over the past 25 years is relatively small, less than 3 man-years, and most of this experience occurred on 3 Skylab flights. Thus, we also support NASA's extensive planning effort for a space station in low earth orbit, and we hope that the station will be available in 1990 to expand the manned space flight research begun by the space shuttle. Unlike some others, we do not believe that a space station would be an unfortunate step backwards.

In aeronautics, another high technology commercial area like communications satellites that was initially neglected by the Reagan Administration, we were glad to see that Congress added some funding in this area last year, and that the Reagan Administration changed its policy last November and subsequently increased the funding for aeronautics R&D. However, one project that was not included in the FY 1984 budget was funding for advanced turboprop technology development. We believe that $15-25 million should be added in this area to support the research needed to improve the passenger seat-mile fuel efficiency of the next generation medium-range turbofan transports. We also support the Numerical Aerodynamic Simulator (NAS) and do not believe that funding should be cut for it. The NAS will have a major impact on aircraft design methods, improving accuracy while at the same time cutting down on long and expensive wind tunnel and flight testing.

This completes my detailed comments on the NASA FY 1984 budget. I would now like to take this opportunity to briefly discuss the NASA budget in the context of overall Federal funding for research and development.

We believe that this nation's economic well-being and national security depends in part upon science and technology. We are not alone in this regard. In his State of the Union message in January, President Reagan stated:

> "...as surely as America's pioneer spirit made us the industrial giant of the 20th century, the same pioneer spirit today is opening up another vast frontier of opportunity - the frontier of high technology. In conquering this frontier we cannot write off our traditional industries, but we must develop the skills and industries that will make us a pioneer of tomorrow. This Administration is committed to keeping America the technological leader of the world now and into the 21st century."

We support this view, as no doubt do many members of Congress. But verbal support is not enough. International competition in such high technology areas as computers, communications satellites, and aviation is increasing, while Federal funding for research and development, a key factor in maintaining our competitive edge, has decreased. This trend has to be reversed.

Private industry can and does do its part. Over the past 20 years, private industry has annually invested about 1% of the GNP in R&D. However, private industry can not afford to do the high cost, high risk research which might eventually have a big commercial payoff - that is the Federal Government's task. Over the past 20 years, the government's support for R&D has steadily declined. In 1964, the government invested 2% of the GNP in R&D. By 1981, this investment had declined to 1.1%. During this same time period, international competition in high technology industries, particularly from the Europeans and the Japanese, has steadily increased. The message is clear. If the United States wants to maintain its preeminence in high technology, and thereby reap the resultant economic and social benefits, it must fund research and development in the future on a greater scale than it has in the past.

One of the areas that it could profitably invest in during the 1980s is the aerospace industry, an industry which is synonymous with high technology. To cite just one example, the aerospace industry's need for small, reliable electronic parts for unmanned space systems led to the creation of integrated circuits in the early 1960s. This, in turn, laid the foundation for the current home computer and video game industries.

Over the past 16 years, while the country's population increased by 19% from 197,000,000 in 1965 to 232,000,000 in 1981, employment of scientists and engineers in the aerospace industry decreased by 18% from 236,000 to 194,000, and during 1982, preliminary figures indicate no change in the employment picture.

In the civilian space program, the decrease was even more severe. In 1965, NASA and its contractors employed 410,000 people including a large number of scientists and engineers. By 1981, this had declined to about 134,000 people - less than one third of the 1965 level. Clearly, NASA could use some more funding during the 1980s to continue its exploration of the universe, and to do the research and development necessary to maintain our preeminence in aviation and space.

This ends our formal remarks, and we would be pleased to answer any further questions you may have.

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DR. RUSSELL DREW

Dr. Drew received his Bachelor's degree in Engineering Physics from the University of Colorado in 1953 and his Ph.D. in Physics from Duke University in 1961. From 1976 to 1977, he served as the Assistant Director for National Security Affairs of the Office of Science and Technology Policy, Executive Office of the President. He was Director of the Science and Technology Policy Office at the National Science Foundation from 1973 to 1976 and was a Senior Staff Assistant in the Office of Science and Technology from 1965 to 1972. He is currently President of Science and Technology Consultants, a small business involved with development of scientific instruments and technical consulting services.

Dr. Drew is Chairman of the Government Activities Council of the United States Activities Board of the IEEE and has chaired the IEEE Technology Policy Conference held in Washington, DC. Dr. Drew specializes in Science and Technology Policy matters and application of technology to advanced instrumentation.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Dr. KAHNE. Mr. Chairman, with me today is Theodore Simpson, the vice chairman of the IEEE Research and Development Committee. Mr. Simpson would now like to provide a few brief comments on the National Aeronautics and Space Administration budget request for fiscal 1984.

Senator GARN. Thank you.

Mr. SIMPSON. Thank you, Steve.

First, I would like to thank you, Senator, for your strong support in the past of the NASA space program. I hope some day that NASA will grant your request to fly on board the Space Shuttle.

Senator GARN. If they want my continued strong support, it will be a necessary part of their future planning. [Laughter.]

Mr. SIMPSON. I think they will take that into consideration.

Second, I would just like to read the highlights of this report rather than the complete statement.

If one neglects for a moment the overall size of the NASA budget for fiscal year 1984, then the budget has much to recommend, particularly in space science and applications, space transportation, and aeronautics. In the space science portion of its budget, NASA has its first major planetary mission since the beginning of the Carter administration 6 years ago.

The Venus Radar Mapper mission, which would cost about half the amount needed for the previously desired VOIR mission, marks the recommitment of the United States to the exploration of the solar system. We support this mission and the continuing work of the Solar System Exploration Committee to fashion a series of relatively low-cost planetary missions for the 1990's. The work that the SSEC is doing is valuable, and their suggestion that the annual funding for NASA's planetary program be raised from $200 million to $300 million appears to be quite reasonable.

We also support NASA's program to explore the universe beyond the solar system, and we are looking forward to the scientific knowledge to be obtained from the Space Telescope. Due to the recently announced cost overruns of $200 million or more and a schedule delay of 12 to 18 months, we believe that Congress should add some funds in this area to minimize the schedule slippage and the impact of this cost increase on other space science projects. Reprograming $20 to $40 million in the fiscal year 1983 budget and adding $40 million in the fiscal year 1984 budget for this purpose appears to us to be a reasonable approach.

In the space applications portion of the budget, we are delighted that Congress added funding last year to start the Advanced Communications Technology Satellite. This was our highest priority item in our testimony last year on the fiscal year 1983 NASA budget. We believed then, and still believe, that it is important to maintain our preeminence in communications satellites—the only successful commercial area in space so far.

In space transportation, the recent successful first flight of the Shuttle Orbiter Challenger marks another milestone for the Space Shuttle. So far, we have had four successful test flights and two successful operational flights. We support the Shuttle wholeheartedly and believe that work must continue to make it a truly operational vehicle.

Given time, we believe that this can be accomplished. We also support the construction of a fifth Shuttle Orbiter as a backup vehicle. This is becoming increasingly important as the United States phases out its expendable launch vehicle capability.

Besides its ability to transport large payloads to low Earth orbit several hundred miles above the Earth's surface, the Shuttle also provides us with the capability to transport a crew of seven astronauts into space. We thus have the capability to determine the value of man in space. This is important, for although the United States has extensive experience with unmanned space systems, its manned space flight experience over the past 25 years is relatively small, less than 3 man-years, and most of this experience occurred on three Skylab flights.

Thus, we also support NASA's extensive planning effort for a space station in low Earth orbit, and we hope that the station will be available in 1990 to expand the manned space flight research begun by the Space Shuttle. Unlike some others, we do not believe that a space station would be an unfortunate step backward.

In aeronautics, another high-technology commercial area like communications satellites that was initially neglected by the Reagan administration, we were glad to see that Congress added some funding in this area last year and that the Reagan administration changed its policy last November and subsequently increased the funding for aeronautics R&D. However, one project that was not included in the fiscal year 1984 budget was funding for advanced turboprop technology development. We believe that $15 to $25 million should be added in this area to support the research needed to improve the passenger seat-mile fuel efficiency of the next generation medium-range turbofan transports. We also support the Numerical Aerodynamic Simulator and do not believe that funding should be cut for it. The NAS will have a major impact on aircraft design methods, improving accuracy, while at the same time cutting down on long and expensive wind tunnel and flight testing.

This completes my detailed comments on the NASA part of the budget. Thank you, Mr. Chairman.

Senator GARN. Thank you very much, gentlemen. We appreciate very much you being here today.

STATEMENT OF SUSAN KOKINDA, WASHINGTON REPRESENTATIVE, NATIONAL DEMOCRATIC POLICY COMMITTEE

Senator GARN. Next I would like to invite to the witness table Susan Kokinda, Washington representative of the National Democratic Policy Committee.

Ms. KOKINDA. Thank you for the opportunity to testify, Mr. Chairman. I would like to say that for the first time in my years, since the President gave an historic speech on March 23 calling for the United States to embark upon its space based strategic defense program, I think we can hopefully talk about reversing the postindustrial nonsense which has gripped the United States since especially NASA began to be dismantled in the late 1960's. I think the implications of the President's speech are enormous, not only in terms of the strategicside, which is not the proper focus of this subcommittee, but also in terms of its implications for our space program and for the U.S. economic recovery as a whole.

I think the only way the President can achieve the very important goal of establishing a strategic defense is if he does so within the context of the much-needed invigoration of NASA and economic mobilization in the United States. I think a very hopeful sign occurred last week when Norman Bailey, who is Director of Planning for the National Security Council, gave a speech in Brussels where he actually outlined implications for the civilian economy of the President's directed energy approach to strategic defense. Because the President's infinite wisdom has chosen not to mention Mr. Bailey's speech, I would like to actually read some quotes for you, because I think it has enormous implications for your deliberations here.

What Bailey says is:

> What has happened over the course of the recent period is nothing new in terms of technological stagnation.

And I quote. He says:

> It has happened over and over again since the industrial revolution. As one generation's technological innovations yield lower rates of return, capital is frozen; investment interests dig in; stagnation leads to collapse, unrest, and war. Then, as in 1933 and 1943 in the United States, the main force of the grip of the vested interests is broken. Resources are forcefully channeled into new technologies under the whip of the national security threat, and the new era of prosperity begins. But unlike national laws, social laws are not immutable. Necessary adjustment can be made without intervening social collapse or war. This is why the President's initiative to divert resources to the development of defense or technology is so important. What could be a more important national security objective than freeing the Western World from the overhanging threat of nuclear conflict in a realistic and technologically and economically productive way?
>
> No, social laws are not immutable. What makes them seem to be is the cumulative crushing weight of little minds and weak will and no vision. What is required and what we must have is a positive vision of attainable goals and the will to attain them.

That is the end of Mr. Bailey's quote. I think that if the administration carries through on the import of that statement, we stand in very good shape of reversing the economic decay of recent decades, and I think the NASA program is an absolutely crucial component of that.

If you look at the combined effects of a major reinvigoration of NASA with the major effort into the directed energy areas which have both military and civilian implications, you are talking about the wherewithal to actually get the U.S. economy back on its feet.

In particular, in terms of NASA, the National Democratic Policy Committee support several very specific goals. We should have a goal of mining and colonizing the Moon over the course of the next several decades. That requires a full commitment to a manned space stations program, and in that regard, I think it's very important that the President recently requested, again—the President in his infinite wisdom chose not to mention it—a report from the Senior Interagency

Group for Space Options for moving ahead with a manned space station.

We also need to reinvigorate a very strong unmanned space program, aiming at colonizing the solar system and, of course, in context with that, we need a very strong space science program so we know what we are actually looking at.

At this point, I would actually like to say something about the so-called budget process, because I think in the case of NASA and the case of our national defense demand that we actually reevaluate the so-called budget process. We may not remember, but for 132 years the United States functioned without a Federal budget. We did not have a budget until 1921. Congress did not have budget committees or a budget office until 1974.

Frankly, if you look at the first 132 years of our existence, we did quite nicely, because Congress and the executive branch were focused on their proper role of determining what the appropriate policies were to assure the most rapid technological advance in the country. That included congressional control over the credit policies of the United States, it included congressional control over such things as internal improvement in infrastructure.

I shudder to think what would have happened in the World War II industrial mobilization if we had had to crunch that through a budget process. I also shudder to think what would have happened with John F. Kennedy's historic decision to go to the Moon if we had to plow that through budget committees. The budget process has turned Congress away from its responsibility into a fascination with numerology over the years which ignores the fundamental questions which make this country strong, which is adequate and cheap credit for what we as a nation deem is necessary for technological progress which is, as this subcommittee is investigating, Federal support for the areas which are going to assure the most rapid technological advance in our basic industries and overall, which means the appropriate climate for education and for individuals in this country to want to become scientists and move forward.

I have noticed over the weekend that Senator Goldwater is interested in revising or removing the budget process. I would like to associate ourselves wholeheartedly with that and urge the Congress, within the areas of NASA, science education, and the President's new strategic defense policy, to return once again to the proper business of legislating and away from the nonsense which has consumed us for the past several years.

I would just like to say in conclusion that our organization is holding conferences in 40 cities around the world over the course of the months of May and June. These conferences are aimed at the President's new strategic defense program, but more importantly, on the problems of the Clausmann H. and where the United States can go if it wants to again return to what it is we should be focusing on.

I think if an epithet was ever written for this great public, it is going to say, "Where once stood a constitution, this now stands a budget process." I would like to urge that we put that aside and move this country back to become an industrial power.

Thank you, Mr. Chairman.

Senator GARN. Thank you, Susan, very much.

[The statement follows:]

STATEMENT OF SUSAN KOKINDA, WASHINGTON REPRESENTATIVE, NATIONAL DEMOCRATIC POLICY COMMITTEE

Thank you Mr. Chairman.

For the first time since the period of the "Great Society" programs when we began to systematically dismantle the National Aeronautics and Space Administration (NASA), I have a greater degree of confidence than ever that the United States has a fighting political chance to push ahead with a completely revamped and upgraded space program. The President's speech of March 23rd which shifted our strategic doctrine away from Mutually Assured Destruction and toward Mutually Assured Survival by use of directed energy systems is historic and one that is fully supported by the NDPC. As the Chairman of our national advisory committee, Mr. Lyndon H. LaRouche Jr., has said, it is the most important statement that a President has made since John Kennedy said we're going to the moon. If the effort toward strategic defense that the President has outlined is to succeed, it must of necessity be a broad based effort that demands the reinvigoration of NASA.

Just as Franklin Delano Roosevelt could not force through the correct economic policies until he had a national crisis on his hands, so today the President's call for a program that is pursued for its military benefits should not detract from its importance, essential importance, for economic recovery, and for providing the opportunity for us to win the American people back to an outlook of technological and cultural optimism. The NDPC calls for a mobilization of America's scientific, technological, economic and skilled resources, and this means most emphatically an aggressive NASA program, to achieve the national goal the President has placed before the nation. Indeed, NASA is one of the programs that can uniquely absorb a doubling of its budget between fiscal years.

Unfortunately, since the mid-1960s, we have played a nickel and dime game with the NASA budget. NASA has been more a series of projects rather than a program where overall objectives have been kept clearly in view and our national commitment maintained. If a doubling or more of the NASA budget seems politically unfeasible, I would remind Members what an individual would have been willing to spend in 1938 compared to 1941.

NDPC PROGRAM

The NDPC calls for establishing as national goals the mining and colonizing of the moon, and putting a man on Mars within 25 years or less. Such an effort requires a full commitment to a manned space station program. In this regard I look with some optimism also on the President's recent request, generally blacked out by the media, for a report from the Senior Inter-Agency Group for Space on the space station.

NASA must also be given the capability to pursue a strong unmanned space program. We should be colonizing the solar system in not more than a few decades down the road so we had better start learning a lot more about what we'll be colonizing. We need an aggressive space sciences program also. Much of what we learn from this is invaluable for moving the economy into the "Plasma Age," the mastery of the 4th state of matter.

I will state categorically that the directed energy beam weapon effort, along with a reinvigorated space program, are essential for economic recovery. I state this on the basis of our understanding of the scientific principles of how the physical economy operates. I state this also on our public record of having the only economic model that has forecasted accurately for the last thirteen quarters while all other models have been wrong to the point of absurdity. There is no recovery from an oil price drop. There is no possibility of recovery if the only levers of policy we use are tax and budget policy. What is essential for recovery is a massive infusion of new more advanced technologies into our agro-industrial base.

It is not a question therfore, of whether we can afford the NASA and directed energy beam weapon programs. We can not afford not to do them. Without these programs the U.S. economy will not revive.

By pursuing such efforts we can expect, as we move into the "Plasma Age," not simply spin-offs, but leaps in productivity, in the individual's increase in power over nature in the process of production, on the order of magnitude of 1000 per cent. The areas of benefits such as in materials processing, the development of new alloys, whole new industries in space, medicine, etc., could go on and on.

For the maximum benefit, these advances must be integrated into the civilian economy at the fastest possible rate. This means that the technology transfer programs, which have been aborted for all purposes, and which has been self-defeating, must be given highest and not lowest priority.

To implement a directed energy weapon and a geared up NASA program requires that our institutions and criteria for policy decisions undergo a profound reversal of the last two decades of sliding into the "Post Industrial Society." We require institutions that can move all policy aspects of these programs forward for twenty and more years to come. I would like to append to my testimony a statement by Mr. LaRouche which addresses this issue.

Thank you.

STATEMENT OF DR. LENNARD A. FISK, JR., DIRECTOR OF RESEARCH, UNIVERSITY OF NEW HAMPSHIRE, ON BEHALF OF SPACE SCIENCE WORKING GROUP

Senator GARN. Next, Dr. Lennard A. Fisk, Jr., director of research, University of New Hampshire, on behalf of Space Science Working Group.

Dr. Fisk, please proceed.

Dr. FISK. Mr. Chairman, I thank you for this opportunity to appear before you. I am appearing as a representative of the Space Science Working Group, which is an organization of leading universities which actively participate in NASA's space science program. The space program has become an essential part of our national existence. We live in the space age. We depend on space research for technological innovation and intellectual stimulus.

The space program has become a measure of American's technological preeminence.

Universities have played a vital role in the space program since its inception. Universities are the intellectual caldrons in which new ideas brew, where new instruments are developed, and new theories generated. Universities also transmit knowledge to the next generations of scientists and engineers. Indeed, Mr. Chairman, as both a professor of physics and the director of research, I can testify first-hand that space science is an ideal subject for training students. The instruments use state-of-the-art electronics; the concepts are intellectually challenging. Students trained in space science are well prepared for a broad range of careers in our technological society.

Space science, like most basic and applied research, fell on lean times in recent years, but there is a growing recognition now that American's economic survival depends on our being able to anchor our position of leadership in development. We must demand and provide the means to support excellence in basic and applied research.

The space science community is grateful and encouraged by the actions that Congress took last year to haul the decline in support of space science. Each of the augmentations that were added to the NASA budget reserved and strengthened the vital effort of the science space efforts. We are heartened also by the increase of support in the administration's proposed budget for fiscal year 1984. However, we should not assume that health has been restored to the program, only that disaster has been averted.

The many years with few or no new starts have left us with a long list of well-studied missions that are waiting to be improved, and it will take years to complete these missions that we know can and should be done. The Space Science Working Group has reviewed the proposed fiscal year 1984 NASA budget for its impact on space science and on university research in particular. We strongly endorse the several new initiatives such as the new start for the Venus Radar Mapper and the substantial augmentation for the Explorer program.

However, we would like to point out several critical areas which require attention: We recommend an $11 million augmentation to the research and analysis portion of the planetary exploration budget. This augmentation will forestall a proposed 10-percent cut in the funds for planetary research and will allow some modest growth toward a minimally acceptable figure. We recommend a $4 million augmentation to the physics and astronomy budget. This augmentation will return the support for this activity that it received in fiscal year 1981, which was already seriously constrained.

We recommend a $1 million augmentation to the mission operations and data analysis portion of the physics and astronomy budget to provide adequate support for the analysis of data from the HEAO mission, and we have recommended a $2 million augmentation to the advanced technology development portion of the environmental observations budget to provide adequate support for the definition of OPEN mission.

These recommended augmentations are critically important to space science activities, particularly in universities. However, the $18 million to which they total by no means solves the current problems for research activities in graduate training in space science.

To meet problems like a lack of flight opportunities for experiments and also needed lab equipment, we recommend the investment of an additional $22 million. These recommendations are discussed in more detail in the advance copy of my testimony.

I would like to call your attention in particular to our concerns for the funding of environmental observations. In the current NASA organization, environmental observations cover a broad range of disciplines. It includes, among other things, upper atmosphere of physics, the plazma physics of the Earth's magnetasphere, and parts of solar and solar wind physics.

This is the branch of space science from which major practical benefits may result in the short term. This is the branch of space science where we can study INSA II, a phenomena commonplace throughout the universe.

The continued support of the definition of the OPEN mission, which is the only major U.S. initiative in space plazma physics in this decade, and the continued support of the development of experiments for the upper atmosphere research satellite are both essential to this central arm of space science.

Finally, we encourage you not to let the current funding problems of the Space Telescope detriment the impact of the space science programs. We, as other members of the scientific community, strongly support the Space Telescope. However, it is only one of NASA's efforts and there are other equally vital programs that should continue to receive needed support.

On behalf of the Space Science Working Group, I thank you for this opportunity to present our concerns and recommendations to you.

Senator GARN. Thank you, very much.

As you noted, the committee has strongly supported NASA's space science activities in general and university-based space research, in particular.

I certainly believe that the subcommittee will continue to do so. But I have got to admit to what you just referred to at the end, that the huge cost overrun associated with the Space Telescope program is bound to impact NASA's other space science activities, and I will do everything I can to mitigate the effect of the telescope on the other programs, but it is not helpful, as you can imagine.

Dr. FISK. I am aware, Senator.

We thank you for your support.

Senator GARN. Thank you for your recommendations.

[The statement follows:]

STATEMENT OF DR. LENNARD A. FISK, JR., DIRECTOR OF RESEARCH, UNIVERSITY OF NEW HAMPSHIRE, ON BEHALF OF THE SPACE SCIENCE WORKING GROUP, ASSOCIATION OF AMERICAN UNIVERSITIES

Mr. Chairman and Members of the Subcommittee, I am testifying on behalf of the Space Science Working Group, an organization of leading universities which actively participate in NASA space science programs.

Over the past 25 years the United States' Space Science program has had an extremely broad and positive impact on our society. The spectacular achievements and discoveries make it clear that we have participated in a golden age of space science, and it is little wonder that this program has been justifiably a source of great pride to the American public. The successes of space science, however, have not prevented a serious erosion of federal support over the past several years. At the universities, where research teams of students and professionals carry out space science projects under the direction of faculty members, this funding decline has created especially difficult problems. Since the university teams depend on NASA contracts and grants for support, loss of funding results in team members having to leave the university. This results not only in a loss of technical expertise painstakingly built over the years, but also removes from campuses high technology activities where students can gain valuable experience and training for their future careers.

Perceiving the especially damaging implications of last year's proposed space science budget, the U.S. Congress took steps to halt the decline by augmenting carefully selected portions of the NASA budget. The space science community is extremely grateful for these actions, and was especially encouraged by the Congressional recognition of the vital role of university research in space science.

We have been heartened by the increased support for space science research in the Administration's proposed FY-1984 budget, and by the Administration's recognition of the vital dual role of university research in the pursuit of knowledge and the training of future scientists and engineers. Among many positive aspects of the FY-1984 budget, we especially commend the Venus Radar Mapper new start, the substantial augmentation to the Explorer program, and the Tethered Satellite System new start. Mr.Chairman, we are pleased that the proposed FY-1984 budget demonstrates a commitment to continued support for space science, and reestablishes the Administration's intent to support the continuation of planetary exploration.

Recomendations of the Space Science Working Group on the FY-1984 NASA Budget

The Space Science Working Group has examined the proposed FY-1984 NASA budget to determine its effect on space science, in particular the research carried out at universities.

We have identified certain critical areas which require additional attention if we are to halt the decline in basic scientific space research. The most critical augmentations, totaling $18 million (M), are in the budget lines for Research and Analysis (R&A) and Mission Operations and Data Analysis (MO&DA). The recommendations are:

Planetary Research and Analysis
Recommended Augmentation $11M

This augmentation, for basic planetary research programs, is to forestall a 10% across the board cut to planetary research programs in the universities and national laboratories, and to allow a very modest step toward restoring these programs to a minimally acceptable level of vigor. The data analysis programs supported in this request provide the means for exploiting and developing information gained through spacecraft investigations, and turning this information into real knowledge and understanding.

Physics and Astronomy Research and Analysis
Recommended Augmentation $4M

This augmentation is for basic research programs, and a major portion of this funding directly supports university teams which interpret and disseminate the scientific results from flight programs. This recommended augmentation would restore support to approximately the FY-1981 level, which was already seriously constrained.

Physics and Astronomy Mission Operations & Data Analysis
Recommended Augmentation $1M

This augmentation is to fund the analysis of data from NASA's HEAO programs, one of which is the Einstein X-ray observatory. The Einstein observatory data set will be the best available in X-ray astronomy for most of the 1980's and represents a major source of support for scientists and students involved in X-ray astronomy.

Environmental Observations Space Physics/ATD Research and Analysis
Recommended Augmentation $2M

This augmentation is for the Advanced Technology Development (ATD) for the program Origin of Plasmas in the Earth's Neighborhood (OPEN), whose support has decreased from $3.5M in FY-1983 to a proposed $1.8M in FY-1984. The OPEN program is the only major U.S. initiative in space plasma physics in this decade, and has extensive involvement by university investigators. The proposed funding level of $1.8M is insufficient to support these university teams.

In our opinion, the above $18M augmentation to the FY-1984 budget is crucial for space science at universities. However, there are additional problems confronting these areas of research to which we also call attention. The ultimate viability of university research programs in space science requires that these problems also be addressed. The total augmentation recommended in this second set is $22M.

Planetary Research and Analysis
Additional $8M

The $11M mentioned above goes only part way to restoring the planetary program to the FY-81 level of effort, while the $8M in this item would complete this restoration. Data returned from our planetary spacecraft are of little use without analysis and interpretation. NASA's Research and Data Analysis program supports planetary science in connection with past and future missions, but the vitality of this process is being seriously compromised. About 100 research groups have lost all NASA support since 1980, with losses of graduate students,postdoctoral fellows and laboratory technicians who provide the backbone of a productive research program.

Shuttle/Spacelab Payload Development
(Physics and Astronomy and Space Plasma Physics
of Environmental Observations)
Additional $6M

In 1979, NASA selected 29 U.S. funded experiments for the Shuttle/Spacelab program. Of these 29, only 3 have been funded for development, 13 are under study, and 13 remain unfunded. With the success of the Shuttle, we urge a more vigorous development of these Principal Investigator (PI) class experiments. We urge NASA to study and simplify the procedures for PI-class experiments on Spacelab, so that more experiments can be carried out without significant increases in the budget. The $6M recommended here would permit further definition and development of the selected investigations.

Suborbital Programs
Additional $2M

This augmentation would permit a significant advance in the SPARTAN program, in which payloads developed under the suborbital sounding rocket program are placed in orbit by the Shuttle and retrieved two or three days later. The FY-1984 sounding rocket line in the proposed budget seems to be based upon the FY-1983 budget before an additional $1M was added by Congress last year.

Laboratory Equipment
Recommended addition of $6M to Research & Analysis

This addition is to upgrade university laboratory capital equipment, which has become obsolete as a result of a decade of underfunding. This equipment problem in NASA-funded groups is part of a general university problem which has been recently addressed by the Administration. We urge NASA to develop a new program of grants for research equipment at universities, and specifically recommend for this purpose: $3M in Physics and Astronomy R&A, $2M in Planetary Exploration R&A, and $1M in Space Physics R&A.

The augmentations recommended above by the SSWG total $40M, which is approximately 0.5% of the total NASA budget. These carefully selected items have a very high leverage in maintaining the vitality of university-based space science. We urge their adoption. We have been pleased with the positive response of the House Committee on Science & Technology to these requested augmentations. Our detailed description of the activities which these augmentations address, and our analysis of the space science budget and its development from FY-1981 is attached in Appendix A for your information. A more detailed discussion of the SSWG's view of the general situation in U.S. Space Science, prepared by Professor E.N. Parker of the University of Chicago, is attached to this statement as Appendix B.

Mr. Chairman, I would now like to address another matter of concern to the Subcommittee, regarding the difficulties with the Space Telescope. The Space Science Working Group fully and enthusiastically supports the continued development of the Space Telescope. However, we are very deeply concerned by the statements by NASA Administrator Beggs, indicating that the Space Telescope cost overruns would be covered at least in part by reprogramming funds from other projects within the NASA Office of Space Science and Applications.

Given the fragile condition of U.S. Space Science and the massive size of the Space Telescope cost overruns, any strategy which tries to squeeze a solution out of other space science programs will undo the positive steps recently taken towards revitalization of U.S. Space Science, and will set us again on a course of precipitious decline. It is vital that the Space Telescope cost overruns be solved without disrupting or postponing other space science programs.

I would like to comment briefly on the OTA Technical Memorandum on space science which was released in September, 1982. We are in general agreement with the general thrust of this memorandum, as far as it goes. The report emphasized the difficulties of planetary science, which appeared to be the most pressing issue at the time. However, the predicament of other branches of space science, including solar and magnetospheric physics and x-ray astronomy, is equally severe. The end result is that the U.S. is slowly dropping out of several fields of space science because of the interminable studies, delays, and eventual cancellation of several well-planned programs in the late seventies and early eighties. As a consequence, leadership in space sciences may well pass to other countries with a more determined approach, such as Germany, France, Japan and the U.S.S.R. A more detailed discussion of these issues, prepared by Professor E. N. Parker of the University of Chicago and reflecting the thinking of the SSWG, is appended to this statement as Appendix B.

In summary, Mr. Chairman, we are grateful for the support and encouragement that space science has received from the Congress, and are pleased with the positive initiatives in the Administration's proposed FY-1984 budget. Mr. Chairman and Members of the Subcommittee, on behalf of the Space Science Working Group, I want to thank you for giving us this opportunity to present our concerns and recommendations to you.

APPENDIX A

SPACE SCIENCE AT UNIVERSITIES IN THE FY 1984 NASA BUDGET

Introduction

This report summarizes the effect on space science of the President's proposed FY 1984 NASA budget. (See Table 1 attached) It emphasizes aspects of the budget of the Office of Space Science and Applications (OSSA) which fund research at universities.

The proposed budget includes two valuable new items, a new start for the Venus Radar Mapper and a significant augmentation in the Explorer budget. Both of these spaceflight programs are of great value to space science, and of special interest to university scientists.

At the same time the FY 1984 budget continues a serious erosion of the science base support for research and analysis, particularly in the Planetary Exploration program, although the rate of erosion is not as drastic as was proposed a year ago in the President's FY 1983 budget.

Background

The lines of NASA's budget which provide the most research funding to universities are Research and Analysis (R&A) and

Mission Operations and Data Analysis (MO&DA). There is an R&A line in each of the OSSA programs and an MO&DA or an Extended Mission Operation line in most of the programs. Funds for R&A support basic research programs from which many relatively inexpensive science results emerge and from which come the new concepts that are the foundation for future major spaceflight missions. The MO&DA line principally supports operation of spacecraft which are in orbit and analysis of data from operating and recently terminated spacecraft.

A year ago, the FY 1982 operating plan and the President's proposed FY 1983 budget contained drastic cuts compared to FY 1981 in the Planetary program for both R&A and MO&DA, as well as significant but less drastic cuts in real support levels (after accounting for inflation) in Physics and Astronomy. Analysis by the Space Science Working Group showed that an additional $60 million ($40 M in Planetary Exploration and $20 M in Physics and Astronomy) was needed in the FY 1983 budget to preserve the (already tight) FY 1981 level of research effort. Action on the FY 1983 budget by the Congress, adding $27 M to the Planetary budget and $5 M to Physics and Astronomy, significantly reduced the damaging effects of the proposed budget. The result has been that, while FY 1983 sees a continued belt-tightening in which inflation is eroding the level of university research, the Planetary program has been saved from dismantling.

While the proposed FY 1984 budget does not contain cuts as drastic as those which were proposed for FY 1983, it still imposes a substantial decrease in support for R&A below FY 1981 levels. The problem is especially evident in the Planetary R&A line, for which the proposed FY 1984 level is 10% below the FY 1983 operating plan, which in turn is not quite at the FY 1981 level. Following is a line-by-line summary of the space science budget.

PHYSICS AND ASTRONOMY

Space Telescope Development -- The reduction from FY 1983 to FY 1984 is as expected since the peak development costs are past. ST continues toward a 1985 launch, and promises to be an extremely valuable astronomical observatory.

Gamma Ray Observatory Development -- The increase from FY 1983 to FY 1984 is as expected as peak development costs (in 1985) approach. This important advance in high-energy astrophysics is proceeding toward a 1988 launch.

Shuttle/Spacelab Payload Development -- The FY 1984 budget level is a 12% increase over FY 1983. This level permits continued development of the Solar Optical Telescope (SOT), as well as definition of the Shuttle Infrared Telescope Facilities (SIRTF) two major facilities designed for repeated flights; these are of great value to solar physics and to infra-red astronomy respectively. Also under this budget line are data analysis of Spacelab-1, scheduled for launch in 1983, and continued development of the Spacelab-2 experiments scheduled for launch in 1985 and of three ultraviolet instruments (designated OSS-3) scheduled for launch in 1986 to observe Comet Halley. The line includes $2 M for studies to define potential payloads for a space station. The proposed FY 1984 funding level will permit the start of development of three x-ray astronomy instruments (designated OSS-2) which had been selected but not funded for development in 1979 as a result of the Announcement of Opportunity for Spacelab payloads.

There is a major backlog of other "selected but not funded" investigations for Spacelab which will remain unfunded in FY 1984. Of 29 U.S. experiments of the principal investigator (PI) type (as contrasted to facilities) which were selected in 1979, by December 1982 only three (OSS-3) have been funded for development, thirteen have received some definition study funding, and another thirteen have received no funding.

Explorer Development -- The FY 1984 budget requests a significant augmentation of the funding level for this line, from $34.3 M in FY 1983 to $48.7 M in FY 1984. The Explorer program is of great value to space science. Its most recent success was the launch, in January of this year, of the Infrared Astronomy Satellite (IRAS). The Explorer program is of special importance to universities because it provides an ongoing level of support for relatively small,usually PI class spaceflight investigations. This line has been fixed near $30 M for many years, with the result that inflation has forced a long stretch-out of the Explorer program. The proposed FY 1984 augmentation makes a significant step toward restoring the productivity of this program and is responsive to one of the recommendations of the National Academy of Sciences Astronomy Survey Committee. It will permit an FY 1984 start on development of the Extreme Ultraviolet Explorer (EUVE), a university-based, principal investigator experiment. The EUVE was selected for flight as a result of a competitive Announcement of Opportunity seven years ago and has been on hold ever since. We note with approval that the queue of previously selected Explorers has been reduced sufficiently to permit the recent selection of the X-Ray Timing Explorer (XTE) for future development. Definition studies for XTE are funded in this 1984 budget, and a development start is likely in late 1985. The budget also permits continued development of the Active Magnetospheric Particle Tracer Explorer (AMPTE), the Cosmic Background Explorer (COBE), and U.S. instrumentation which fly on the German Roentgen Satellite (ROSAT).

Mission Operations and Data Analysis -- This line in the Physics and Astronomy budget appears to be funded at an adequate level in FY 1984 to support operations and analysis of the IRAS, AMPTE, and International Ultraviolet Explorer (IUE). However, funding of the extended analysis of data from the High Energy Astronomy Observatories (HEAO) is down from the FY 1983 level. The budget also supports the in-orbit repair and continued operation of the Solar Maximum Mission (SMM), and preparation for Space Telescope operations and refurbishment. The SMM repair mission will provide a valuable extension of this significant solar investigation, as well as the first demonstration of the in-orbit repair capability of the Shuttle.

Research and Analysis -- This critical line of the budget shows a $1 M (3.5%) increase from FY 1983 to FY 1984. Apparently the FY 1984 proposal carries an inflationary increase of about 10% over the proposed FY 1983 budget, ignoring the $2 M which was added to this line as a result of the FY 1983 Congressional action. While this looks like a healthy increase over FY 1982, it must be remembered that the FY 1982 budget was 13% below that of FY 1981 in this line. In fact, the proposed FY 1984 budget is only about 13% above the FY 1981 budget,.certainly not an inflationary growth; and this budget had fallen 15% between FY 1979 and FY 1981. The Physics and Astronomy R&A includes three subdivisions: Supporting Research and Technology (SR&T) which funds basic experimental and theoretical research, principally at universities; this part is down $0.5 M from FY 1983. Advanced Technology Development (ATD), is up $1.2 M from FY 1983; this part will principally be used for studies of the Advanced X-Ray Astrophysics Facility (AXAF), a 1.2 m X-ray telescope which was the highest priority in the recent National Academy of Science Astronomy Survey Committee report. Data Analysis of past missions is up $0.3 M from FY 1983.

(Note, it is difficult to compare the FY 1984 budget document, which includes figures for FY 1982 and 1983, with earlier documents giving FY 1981 figures because Space Plasma Physics R&A was included in the Physics and Astronomy R&A line in Fy 1981 but now appears in Environmental Observations R&A where it is combined with some items that appeared in the suborbital part of Physics & Astronomy in FY 1981. See Table 2.)

Suborbital Programs -- This budget line supports aircraft, balloon, and sounding rocket programs which combine with R&A efforts to yield important scientific results at relatively low cost with relatively quick turn-around. These programs are ideally suited for university based research programs, particularly those involved in the training of graduate students. About half of the $5 M (11%) increase from FY 1983 to FY 1984 will pay for basic support of the National Scientific Balloon Facility (NSBF) which has been transferred from he National Science Foundation to NASA. While this transfer took effect at the beginning of FY 1983, the full cost was not included in this line of the FY 1983 budget. Aside from the increase for the NSBF, it appears that the FY 1984 budget proposal represents an increase of about 7% over the proposed FY 1983 budget, and ignores the $1 M which was added to the sounding rocket program as a result of the Congressional action.

(As with the R&A line, direct comparison of the current budget proposal with FY 1981 levels is difficult because of transfer of the Applications Airborne program into this line. See Table 3.)

PLANETARY EXPLORATION

Galileo Development -- The proposed FY 1984 budget includes funding for continuation of the Galileo program, progressing toward a launch in 1986. This program is well past its peak development costs, so this budget line is $19 M lower in FY 1984 than in FY 1983.

Venus Radar Mapper (VRM) -- The President's budget proposes $29 M for an FY 1984 new start of this mission. This is the first planetary new start since that of Galileo in FY 1978. VRM, which has the endorsement of the Space Science Board is a less ambitious exploration of Venus than the Venus Orbiting Imaging Radar (VOIR) mission which had been proposed by NASA a year ago for a new start, but was not included in the President's budget. VRM preserves the principle objective of VOIR, radar mapping of the entire planet, but does so with somewhat lower resolution and without several ancillary observations that had been part of VOIR. The projected runout costs of VRM through FY 1988, the proposed year of launch, are approximately $340 M, compared with roughly twice that for VOIR. VRM is an extremely valuable step in planetary exploration which will have the active participation of a number of university scientists.

International Solar Polar Mission (ISPM) -- The FY 1984 budget continues to fund the US experimenters on the European ISPM spacecraft which is also scheduled for 1986 launch.

Mission Operations and Data Analysis -- The proposed level of $43.4 M, up 13% from the FY 1983 operating plan, appears to be adequate for operation of the Pioneer and Voyager spacecraft, which had been threatened with termination by the President's FY 1983 proposal and were saved by Congressional action. It also includes funds for development of systems needed for operation of Galileo and ISPM.

Research and Analysis -- Here we have a continued serious erosion of the science base upon which the planetary program rests. The proposed FY 1984 level of $45.5 M is 10% lower than the FY 1981 level of $50.7 M. While this is not as damaging as the 30% cut which had been proposed a year ago for FY 1983, it is still a drastic reduction when three years' inflation is considered. While the FY 1984 proposed level is $10 M higher than the President's FY 1983 proposal, it is nearly $5 M lower than the actual FY 1983 operating plan which resulted from Congressional action on the FY 1983 budget. This 10% cut is distributed almost uniformly over all the planetary R&A components except for the Halley's Comet program which remains at $2.2 M in FY 1984, the same as FY 1983.

ENVIRONMENTAL OBSERVATIONS

Research and Analysis -- R&A in Environmental Observations includes programs in upper atmosphere, atmospheric dynamics, oceans, and space plasma physics. The space plasma physics part was previously included in the Physics & Astronomy R&A, (see Table 2) and this part is seen as space science while the other aspects of the Environmental Observations program are more directed toward space applications. FY 1984 shows modest growth in these lines from FY 1983. One item of concern to the space plasma physics community is the relatively low priority in Environmental Observations on definition of the mission Origin of Plasmas in the Earth's Neighborhood (OPEN) for which experimenters were selected two years ago. This mission had enjoyed higher priority when space plasmas were part of Physics and Astronomy. The Advanced Technology Development (ATD) portion of this R&A line which includes funding for OPEN definition drops from $3.5 M in FY 1983 to $1.8 M in FY 1984, resulting in serious cuts for the definition efforts of experimenters who have been selected for this mission.

Upper Atmosphere Research Satellite (UARS) -- Development of experiments for this mission continues but the FY 1984 budget does not permit a start of the spacecraft development. It is hoped that this new start will occur in early 1985. UARS will provide the first global measurements of stratospheric & mesopheric ozone, chemical species that affect ozone, energy inputs, temperatures and winds.

TABLE 1

SPACE SCIENCE IN THE NASA OSSA BUDGET
(in millions of dollars)

	1981	1982	1983	1984
Total NASA	5425.6	6020.0	6839.4	7106.5
Total Research & Development	4334.3	4772.0	5542.8	5708.5
Total Space Science & Applications	873.0	896.2	1034.1	1068.0
Total Physics & Astronomy	323.7	322.4	441.0	514.6
Space Telescope Development	119.3	121.5	137.5	120.6
Gamma Ray Observatory	8.2	8.0	34.5	89.8
Shuttle/Spacelab	27.4	47.6	83.0	92.9
Explorer Development	33.3	33.3	34.3	48.7
Mission Operations & Data Analysis	38.9	45.3	74.8	79.5
Research & Analysis	37.7*	22.9	28.8	29.8
Suborbital	30.9*	43.8	48.1	53.3
Total Planetary Exploration	175.6	210.0	186.4	205.4
Galileo	63.1	115.7	91.6	79.5
Venus Radar Mapper	-	-	-	29.0
International Solar Polar	28.0**	5.0	6.0	8.0
Mission Operations & Data Analysis	61.8	42.6	38.5	43.4
Research & Analysis	50.7	46.7	50.3	45.5
Total Life Sciences	42.2	39.5	55.7	59.0
Flight Experiments	12.7	14.0	24.0	23.0
Research & Analysis	29.5	25.5	31.7	36.0
Total Solid Earth Observations	151.4	149.4	132.2	74.4
Landsat-4	88.5	81.9	61.7	15.8
Extended Mission Operations		2.8	1.8	1.0
Shuttle/Spacelab	2.0	12.3	13.8	15.0
Geodynamics	23.4	22.9	26.2	28.0
AgRISTARS	21.5	14.0	15.0	-
Research & Analysis	16.0	15.5	13.7	14.6
Total Environmental Observations	104.1	133.0	156.9	163.0
Research & Analysis (less Space Physics)	76.8	(59.7)	(71.2)	(76.2)
Upper Atmosphere		20.5	27.7	29.6
Atmosphere dynamics		22.3	26.5	28.4
Ocean		16.9	17.0	18.2
Space Physics (Plasmas)	***	12.1	15.2	15.7
Shuttle/Spacelab	1.7	4.1	3.7	7.6
Operational Sat. Improv.		6.0	6.0	0.6
Earth radiation budget	20.3	24.0	24.0	15.5
Extended mission ops	-	16.1	22.4	27.4
Upper Atmos Research Satel	-	6.0	14.0	20.0
Other	5.3	5.0	-	-

NOTES TO TABLE 1

*These two lines did not include the same items in FY 1981 as in later years and so FY 1981 numbers are not directly comparable. See Tables 2 & 3.

**In FY 1981 ISPM was in the Physics & Astronomy program, and included a US spacecraft (since deleted) in addition to US experiments on a European spacecraft.

***In FY 1981 Environmental R&A did not include Space Physics, which was in Physics & Astronomy R&A (See Table 2).

Table 2

	1981	1982	1983	1984
Physics & Astronomy R&A	37.7	22.9	28.8	29.8
Space Physics sounding rockets	2.5	**	**	**
Environmental Observation				
Space Physics (Plasmas) R&A	*	12.1	15.2	15.7
TOTAL	40.2	35.0	44.0	45.5

*Space Physics (Plasmas) R&A was included in Physics and Astronomy in FY 81.

**The Space Physics (Plasmas) part of the sounding rocket section of the Suborbital Physics and Astronomy line in FY 1981 was transferred to Environmental Observations R&A for FY 1982, 1983, 1984 budgets. This part was $2.8 M in FY 1983, $2.5 in FY 1982, and estimated at approximately $2.5 M in FY 1981.

Table 3

	1981	1982	1983	1984
Suborbital Physics & Astronomy				
Sounding Rockets (less Space Physics, see Table 2)	22.5	24.4	27.0	27.7
Airborne*	4.5	17.5	17.6	18.9
Balloons	1.4	1.9	3.5	6.7
Applications Airborne	12.0	*	*	*
Total Suborbital	40.4	43.8	48.1	53.3

Applications Airborne included in Physics & Astronomy starting FY 1982. $12 M is estimated as the number for this item in FY 1981.

APPENDIX B

COMMENTS ON THE UNITED STATES SPACE SCIENCE SITUATION

The opening sections of the OTA Technical Memorandum* on space science give a brief survey of the many different aspects of space science. Then the memo goes on to say that planetary science is in real trouble because there are no new missions so that the scientists active in that field are without funds and without a future. They will soon be forced to turn to other things. And that is a fairly accurate picture of planetary science. But the memo stops at that point, leaving the impression that the other branches of space science surveyed in the opening sections are alright.

As a matter of fact, most branches of space science in the U.S. face a bleak future.

To illustrate a typical situation, solar physics can look forward to perhaps 12-15 months of new data at solar minimum following the repair of the Solar Maximum Mission (SMM). The Interplanetary Solar Polar Mission was to have been launched in 1984 for a look at the Sun--and conditions emanating from the Sun--at high latitudes, where no spacecraft has ventured before. But the U.S. spacecraft carrying the coronagraph was cancelled and the U.S. launch of the European spacecraft was postponed to 1986 - so that the mission is far less effective than originally planned and so far in the future that the U.S. research groups--even if they are participating on the European spacecraft--are disbanding for lack of support. The Solar Optical Telescope (SOT) is going ahead at a slow pace now, with a launch tentatively planned somewhere around 1988, assuming that there are no further delays in funding. The much touted opportunities for observations from Shuttle have not materialized - leaving the field of solar physics with little more than 12 months of SMM data for the rest of the decade. The fact that there are many crucial observations to be performed, as elaborated by intensive study and planning reports over the past six or eight years, seems to carry no weight. The space missions fade away as their time approaches.

Turning to magnetospheric physics, we can look forward to the Chemical Release Experiments of the AMPTE Mission, expected to be launched in 1984 in which a German spacecraft outside the magnetosphere is to release chemicals to be detected by the instrumentation on a U.S. spacecraft located inside the magnetosphere, giving direct measurements of the rate of entry of solar wind gases into Earth. But there is no real U.S. commitment beyond that. The OPEN Missions to study plasma waves, etc., in the magnetosphere and surrounding solar wind are moving along with a launch tentatively planned for 1991 or 1992, perhaps. The Shuttle and associated Spacelab experiments have not materialized. It may be ten years before there is a new mission. It is just not possible to keep good physicists interested in space experiments when the future is so far away and so uncommitted.

The field of X-ray astronomy looks forward to flying a less expensive version of the HEAO-II X-ray telescope on the German X-ray spacecraft to be launched in 1986. The X-ray Timing Explorer (XTE) at about the same time is the only new U.S. mission firmly in the pipeline. The large, high resolution X-ray telescope, Advanced X-ray Astrophysics Facility (AXAF) is only a dream that could not materialize before 1990, at the earliest. The initiatives are passing to the Japanese and the Germans, who have committed themselves to four X-ray space missions in the coming years. It is ironic that the U.S., having brought the science of X-ray astronomy to a peak with HEAO-II, should now sit back, unwilling to commit capital, while other nations press on from the summit that we established by an investment a decade ago in our own space science. As in the other fields already cited, the X-ray community is frustrated year after year by a refusal of the U.S. to commit itself to new missions. Shuttle opportunities, once presented in glowing terms to the scientific community, have failed to materialize. Postponement into the next decade is the word of the day, which leaves a strong doubt that the field will go ahead in the U.S. at any time in the forseeable future.

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*Space Science Research in the United States: A Technical Memorandum by the Congressional Office of Technology Assessment (September, 1982)

In the field of gamma-ray astronomy, France and the U.S.S.R. have cooperative plans for an orbiting gamma-ray observatory, to be launched some time in 1983-1984. It will be a simple affair, but capable of doing some interesting science. The U.S. Gamma-Ray Observatory (GRO) will take a more precise and detailed look at the gamma-ray sources in the sky, but it has now been pushed back to a tentative lauch in 1987-1989, at the end of the decade. It is not clear how one can sustain interest and scientific capability in the interim, particularly when the scientific community is aware that a further delay in the launch of the U.S. GRO may come with any new annual budget cycle, as have the endless delays in the past.

Taken together, these plans do not add up to much for space science in the U.S. in the next ten years. Three or four missions among as many different fields of inquiry in a ten year period are not effective for getting at the crucial issues. All of the major fields of space science are focussed on important discoveries and critical issues in the active universe around us. Progress in each subject is paced by observations from spacecraft. Each subject is propelled by the vigor and enthusiasm and past successes of a small group of U.S. scientists. If the U.S. does not have some new starts and rapid progress in space missions in the very near future, U.S. space science will wither away. Space science will pass into the hands of other countries with more vigorous and determined approaches (Germany, Japan, France, USSR). Not a word of this, beyond planetary science, is to be found in the OTA memo.

Another point is that the memo presents the annual budget for NASA space science, (Figs. A-2, A-3, A-4) showing the general downward trend over the years and small upturn at the end for 1983. The figures make the point, but it should be emphasized that the small upturn for 1983 reflects the delay of launch dates, particularly SOT, Galileo and the Space Telescope. The actual money going directly into scientific research outside NASA is not larger in 1983 than in previous low years. U.S. scientific teams are in the process of disbanding today because the launch dates for the spacecraft with which they are concerned have been pushed so far in the future that: a) the dates are not always believable; and b) the support for the teams has been turned off by NASA to save money in the interim.

A willingness to make major capital investments in the future is as essential for effective space science as it is for most other serious activities. Short term policies, based on momentary political winds, make effective science impossible. It was the NASA investment in the sixties and early seventies that placed our country in the prestigious position of number one in space and in space science. Unfortunately, the causes of our success were not perceived in all quarters, so that the late seventies and the first two years of the eighties saw: a) little or no new investment; b) an unwillingness to support the continued operation and analysis of the scientific space missions built with earlier investments; and c) a tendency to reverse policies every 12 months.

The result is that the U.S. has dropped out of most fields of space science for the rest of the eighties. Worse, the stochastic policies of the past few years have created a credibility gap. The scientific community has learned that no matter how well conceived, no matter how far along, and no matter how internationally based, a space mission can be cancelled at any point at the blink of an eye. One has to remember that the motivation for scientists to contribute their time and effort to a space mission is not monetary profit, but scientific success. And scientific success requires a firm commitment to go ahead with space missions.

By: Eugene N. Parker
Professor of Physics
University of Chicago
Laboratory for Astrophysics
and Space Research
December, 1982

STATEMENT OF ALAN M. LOVELACE, VICE PRESIDENT FOR PUBLIC POLICY, AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

Senator GARN. Next, Dr. Alan M. Lovelace, not a stranger to this subcommittee, but in a new capacity, he looks more relaxed, calm, quiet; vice president for public policy, American Institute of Aeronautics and Astronautics.

Dr. LOVELACE. Mr. Chairman, I appreciate the opportunity to appear before the subcommittee.

I would like to submit a fuller statement for your record, Mr. Chairman, and make a few brief remarks this morning.

Senator GARN. We will be happy to include it in full if it makes your recommendations to NASA that I go on the Space Shuttle. [Laughter.]

If it has that comment in it——

Dr. LOVELACE. We will so amend our statement, Mr. Chairman. [Laughter.]

I may add to that, if I can go with you.

Senator GARN. I am willing. You know it will take seven. They had three vacancies on the last flight, three spare seats.

Dr. LOVELACE. All right, you and I will work on that.

The AIAA is a nonprofit technical society with over 30,000 members who are engineers, scientists, and students engaged in every sector of the aerospace profession, from industry to government to universities.

Our testimony represents the expertise of a select group of our members who were given this responsibility by me, as vice president for public policy, and as such does not necessarily represent a consensus of the total institute's membership.

The statement I would like to read now is drawn from our lengthier document which I referred to earlier.

First, I would like to address the space portion of the NASA budget. Under space science and applications, we have concerns in the following areas: Physics and astronomy. We believe the Space Shuttle's Space Lab payload development program is underfunded despite the 12-percent increase over fiscal year 1983.

In 1978, 29 experiments were selected for flight in the Space Lab; none has flown.

If the fiscal year 1984 budget request is approved, it will add 3 experiments to the 3 previously funded, leaving 23 without funding. We are concerned that the 23 unfunded principal investigators will not be able to hold their teams together while they wait for money to prepare their experiments for flight, and, thus, we urge additional funding in this area.

Planetary exploration, research, and analysis received a 10-percent cut in fiscal 1984, and this could result in the loss of one out of every four planetary scientists and will shut down the crucial facilities. Considering the investment we have placed in planetary exploration over the years, this would seem to be a tragic loss. We applaud the addition of $10 million by the authorization committees for this item.

In space research and technology, we were pleased to see a 12-percent increase in this area which we consider to be the heart of NASA's future space capabilities. We are, nevertheless, concerned about the lack of adequate funding for advanced liquid rocket propulsion technology, a subject on which we have published a position paper and which I would like to submit a copy to the committee for inclusion in the record.

The paper says, "Advances in four basic types of liquid rocket propulsion technology are needed to insure our Nation's capability to operate effectively in space." The paper concludes, however, "That the Nation's capability has declined to the point where we soon may be unable to produce these advances, and a substantial increase in Government-supported research and technology in this area is needed."

The AIAA urges your support for additional funding in the area of technology utilization. NASA requested $4 million for fiscal year 1984 and a reduction of $5 million from the previous year. We support the recommendation of the Senate authorization committee to increase the budget request by $6 million.

The AIAA has had first-hand experience in transferring NASA technology to the private sector by means of its corporate associates program, and we can attest to its true value.

The Space transportation system: The AIAA believes that it would be wise to retain the capability to produce a fifth Orbiter, a fifth Shuttle Orbiter. Some of the reasons we think additional or better will be needed are: A shuttle flight cost drop experienced that demand will increase; flight sites must account for potential outages; scientific and commercial uses of the orbiters will require longer on-orbit stay teams.

Consequently, we support the addition of $85 million by the authorization committee to support this goal.

In advance programs, the AIAA has called for increases in the advanced programs area for many years and still believes that it is greatly underfunded. Specifically, we believe planning for an advanced Orbiter transfer vehicle and a communitywide systems study of evolutionary space stations should be supported.

We endorse the authorization committee's adding funding over $5 million to this area.

Let me furnish, briefly, to aeronautics. In 1982, the administration published its aeronautical policy paper, which we strongly support. The AIAA was surprised, then, to find the NASA aeronautics budget for fiscal 1984 increased by only 7 percent, a little above inflation.

The AIAA endorses the crops program for aeronautics opposed by NASA, including a new start and an aerodynamics simulator program, but believes increases in the number of other areas are also needed. Two of these areas are supported by funding proposed by the Senate authorization committee. They are an advanced turboprop program and the advanced turbofan program.

The advanced turboprop program, which was not funded this year, is one of the most promising areas which NASA is pursuing.

This program promises valuable benefits for civil transports in military aircraft for high-endurance, long-range missions. It is highly appropriate technology for NASA to spearhead because of the risk investment and long-term application which places it outside the reach of industry.

The advanced turbofan technology program is a new initiative for the development of advanced component technology for the next generation of large transport aircraft.

Investment in large engine R&D has a large payoff for the United States in foreign trade and reduced fuel consumption.

Justification for a number of increases in the R&D based systems technology, research and program management construction facilities are contained in our full statement.

Mr. Chairman, this concludes my remarks. I would be glad to try and answer any questions that you might have.

Senator GARN. Thank you. I am particularly interested in your comments about the need for additional support for the advanced liquid rocket propulsion technology.

Could you expand on the rationale for accelerating this program and how much funding might be required in fiscal year 1984?

Dr. LOVELACE. Let me briefly amplify my comments, Mr. Chairman. It is fundamental to all of our endeavors in space that we have the necessary propulsion capability to undertake and successfully accomplish these missions. They really come in the four areas of basic primary thrust rocket propulsion capability.

In this class, for example, would be the liquid engines on the Orbiter as they are used today; high performance systems for transfer vehicles, another class of propulsion technology; and then two remain: Space propulsion capability for executing certain orbit changes—for example, maneuvering in space—and finally, high-energy, station-keeping propulsion capability used for maintaining the positioning of satellites in other orbits.

Because of the lack of funding to the base technology, we are seeing quite a substantial erosion of the industrial base. We may appear to be overly strong in recommendation, Mr. Chairman, but I think it comes from the understanding that this is very much a long lead set of technologies that need to be developed, proved, to provide the capabilities that will be needed out in the 1990's.

Senator GARN. Thank you, very much. We appreciate both of you coming. It is nice to see you again.

Dr. LOVELACE. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF DR. ALAN M. LOVELACE, VICE PRESIDENT FOR PUBLIC POLICY, AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS

The AIAA is a non-profit technical professional society with over 34,000 members who are engineers, scientists and students engaged in every sector of the aerospace profession from industry to government to the universities.

The Institute's professional membership is divided into 68 sections around the country. To further scientific and technical advancement, we have 51 technical committees covering every aspect of the aerospace profession. Our testimony today does not necessarily represent a consensus of our membership, any more than one administration is a perfect representation of the will of all the people. Our testimony represents the expertise of a select group of our members who were given this responsibility by me in my capacity as Vice President for Public Policy.

Space

We welcome the opportunity to offer an outside perspective on our nation's role in space. As we observe the 25th anniversary of the NASA, we recognize the need to build on our heritage and to maintain a balanced and dynamic civil space program within the fiscal constraints of the 1980s.

As we have consistently stated in our testimony in the past, the NASA program is, in our opinion, the wrong slice of the federal budget in which to trim our relatively modest on-going investment in research and development. To this end, last year we generally endorsed the level of NASA space activity proposed by the Administration, while pointing out several areas where an increased investment was justified. We commend this subcommittee, as well as the entire Congress, for appropriating more resources in this area than were originally requested.

As President Reagan clearly recognized in his State-of-the-Union Address, we live in country ever more dependent on technology for its strength and survival. We therefore feel confident that there are few ways to better invest in the nation's future than in the civil space program, an area which today commands an exceedingly small portion of the federal budget.

In that light, we participated in the development of the national space policy statement released last July, a policy which we find generally acceptable.

There are two major areas, however, in which the Administration's position falls short of AIAA expectations. As we mentioned in last year's testimony, and formally endorsed in May, the AIAA feels it is essential that the nation now commit itself to an evolutionary program to establish and maintain a multi-purpose facility in low earth orbit. Such an orbital capability would use and complement the space shuttle's ability to enable human operations in space. We believe eventual long-term habitation is a capability the U.S. should pursue. The Administration's policy commitment to "permanent space facilities" is ambiguous, however, and this year's budget submittal leaves us somewhat uncertain as to the Administration's current course.

In our opinion, a second needed policy statement is a firm commitment to a specific national space program plan, complete with schedule milestones. Such a comprehensive statement of strategy has not yet appeared. Although we have taken no position as to the specifics of such a plan, we have repeatedly emphasized the need for long-term commitments to add needed stability to our efforts. As we have stated in the past, stability itself will go far toward insuring the vitality of U.S. accomplishments in space.

Mr. Chairman, we are prepared to offer more detailed commentary at a later date on current National Space Policy should such a critique be requested.

We will now review the proposed program in light of the commitments in stated National Space Policy, and our reaction to this guidance.

We have organized our remarks today into the areas of space science and applications, space research and technology, and space flight, which includes space transportation. We are pleased to see that, in each of these areas, the proposed program is consistent with avowed policy.

However, we are concerned this year that the proposed budget falls far short of meeting the overall objective to which we have concurred: maintenance of leadership in space activities. In light of these considerations we feel it is not unreasonable, in fact it is mandatory, that we advocate today a more aggressive civil space program than that which has been proposed by the Administration.

One year ago, NASA's space science program--particularly the planetary exploration program--was severely threatened. However, the Congress responded, showing its commitment to maintaining the U.S.'s leadership in space exploration. We commend this support and the restoration of vital funds to the planetary research and data analysis program.

We are concerned, however, by the somewhat lethargic pace of science payload development for the shuttle. Twenty-nine experiments by U.S. principal investigators were selected from the original announcement of opportunity in 1978. None of these has flown. Three ultraviolet experiments have hardware development money for flight in 1985-86. The 12% increase for shuttle payloads in FY 84 under Physics and Astronomy will now allow three x-ray instruments to be developed for OSS-2. But what of the rest? How can a principal investigator hold his/her team together for years waiting to be funded?

In one other very important area the Administration's budget has not reflected last year's debate. We refer to the Research and Analysis line item in the Planetary Exploration budget which has received a 10% cut in FY 84. If left unchanged, this would translate into a loss of 150 of the approximately 600 research programs now funded, or one out of four planetary scientists. Alternatively, crucial facilities would be closed down.

In fact the research and analysis budget in a number of space science disciplines has been eroded over the last several years. Not only are young scientists being discouraged from entering these fields, but established research teams, their experience gained from a decade of space experiments, are being disbanded. We consider this a tragic loss of our nation's investment.

The Congress has continued to recognize the value of basic research support. We believe it is consistent with its previous position to restore specifically the few million dollars to planetary research and analysis necessary to maintain a minimum viable program and to continue the upward trend established in FY 1983 in other areas of space science.

There is no doubt that our planetary exploration program, from the original Mariner 2 twenty years ago, to the spectacular Voyager flybys of Jupiter and Saturn, has been a visible symbol to the world of America's technological leadership. But the retrenchment of the U.S. planetary program in the past several years--the lack of new starts, the cancellation of NASA's Solar Polar spacecraft, the failure to develop a mission to Comet Halley--is viewed by the world as a signal that the U.S. is losing its technological leadership, losing its will to compete. At a recent international scientific conference, there were frequest jokes about the "tortoise and the hare," as the Soviet Union prepares two major space missions to Venus and Comet Halley in 1985-86 and successfully solicits Western European cooperation.

NASA's 1984 budget has made a good beginning in reversing that trend. However, the funding for planetary exploration remains at approximately 25% of the level a decade ago. NASA's Solar System Exploration Committee has recommended a core program for planetary exploration. The first four elements of the core program are the Venus Radar Mapper, a comet rendezvous/asteroid flyby, a Mars geochemical climatology orbiter and a Titan Probe. The American Institute of Aeronautics and Astronautics endorses the SSEC core program and recommends that NASA proceed as quickly as possible to implement the four missions listed above.

In the area of Space and Terrestrial Applications, additions made to the communications budget in FY 83 for development and demonstration of advanced space communications technology are especially noteworthy. The currently proposed course of developing and flying Ka-band (30/20 GHz) components and systems in an Advanced Communications Technology Satellite (ACTS) has our endorsement. This course should be followed using the most cost-effective method possible. We strongly believe that the U.S. must continue to develop this technology now with or without commercial participation.

I want to reiterate at this point our view that the Administration's goal of moving applications programs to the private sector is sound. The immediate task is to identify and help resolve obstacles to effective and timely transition, while maintaining adequate technical support in the interim. Improperly planned actions here can have a significant adverse effect on our nation's economic, political, and military strength in the next decade. It therefore seems difficult to understand why an Administration dedicated to private-sector business development would once again propose to cut back funds for technology utilization. The AIAA's experience in our special programs involving many of the Fortune-500 non-aerospace corporations has clearly demonstrated the usefulness of these relatively small efforts in bringing NASA-developed technology and services to the non-aerosapce private sector, a function which is oriented precisely in the direction this Administration has identified to rebuild the nation's economy.

I would now like to turn to the Space Research and Technology portion of the budget. We have consistently pointed out that this is the area we consider to be the heart of NASA's and our country's future civil space capabilities. The 12% increase proposed here is a healthy sign for the future of the U.S. space effort. Technology base programs are up over 9%, and funding allocated to important space flight experiments has been increased by over 2 million dollars over FY 1983. We strongly endorse these trends.

Even in light of the overall increase in this area, however, examination of the specifics of the proposed Research and Technology budget indicates that funding may not be available for many needed programs. A large portion of this funding appears to be earmarked for space station-related technology development. Although we support an evolutionary approach to a space station, we urge caution in channelling significant technology funding toward such an initiative without a clear concept of the requirements or design constraints. Such a strategy is of special concern when it is pursued at the expense of other worthwhile opportunities.

For several years we have expressed specific concern about support for advanced liquid rocket propulsion technology. We have just published an Institute position paper citing specific areas of national weakness in this vital technical field. The budgetary increase in this area in FY 1983 was heartening, but this year's leveling off of chemical propulsion research and technology funding may leave the U.S. in a position where it is unable to effectively produce needed advancements to capitalize on other technical opportunities or meet future requirements. As you know, many space technology advancements take years from concept inception to fruition. Perhaps none has a longer lead time or a more intense impact on system costs and capabilities than rocket propulsion. We urge continued growth in this critical field, and we are prepared to make specific technical recommendations.

The final area in which specific comment on the proposed space budget is in order is that of Space Transportation. The Space Shuttle program, an arduous technical and managerial challenge, is maturing rapidly; OV-104 will be delivered in 1984. Many obstacles to cost-effective operation remain, but the U.S. can rightly be proud of this new capability.

Continuing efforts to make use of the STS even more effective are fully justified, including on-going development of filament-wound tanks, the Centaur upper stage and expanded external tank production facilities. Each of these capabilities was recommended by the AIAA last year.

We also endorse steps to control STS operation costs, now being taken by NASA, which promise to improve program economies. We strongly support additional development work aimed at further reductions in launch costs, and at improving the utility of the space transportation system.

We are, however, disappointed that a specific commitment to maintaining an orbiter production capability has not yet been made. We recognize that such a step is expensive, and that clear analytical justification for a fifth vehicle cannot be made at this time on the basis of firm user commitments. However, since a fifth orbiter would not come on line before 1988 or 89, it is premature, by at least several years, to expect traffic projections for the late 80s or early 90s to be based primarily on firm user commitments. Furthermore, the President's recent directive endorsing commercialization of space activities can only be realized if the private sector is convinced that the capacity of the STS is sufficient to provide on-time launch, given defense priorities and potential system contingencies. Consideration of potential commercialization of expendable launch vehicles is another factor which clouds the picture, and makes it even harder to clearly identify future STS traffic demand. However, as we noted last year, several factors lead us to believe that an investment which retains the option for an additional orbiter would be wise. We believe it is likely that:

- Per flight costs of STS operations will drop as the full fleet comes on line and experience increases;

- The nation will come to reply on the STS for many critical missions;

- Fleet size must account for potential outages;

- Scientific, commercial and other uses of the orbiter will require longer on-orbit stay times and more flexibility than currently planned, and

- The overall demand for space launch service will increase over the next two decades.

These factors all point to the likely need for a larger fleet. We support the strategy of timely acquisition of structural and component spares to keep the cost of future vehicles within reach.

The Advanced Programs area of the Space Transportation budget continues to grow at a rate greater than that of the overall agency, but in our opinion, is still desperately underfunded.

Whereas last year we advocated the urgent need for an advanced upper stage for the shuttle, we now observe that the Centaur-G and G-prime, along with the PAM IUS and other available configurations, should meet the needs we foresaw for the 1980s. Of course, they do not have the full set of characteristics needed for the long-envisioned Orbit Transfer Vehicle (OTV). To assure our nation's ability to fully use space in our interest, we still believe a more capable vehicle will be required in the longer term. Planning for this vehicle must continue now if we are to be in a position to implement this capability when it is needed.

Such a vehicle could be especially attractive if it were based in low earth orbit. A propellant depot/OTV base could be a derivative of space platforms or space stations developed in the late 1980s and early 1990s. In our opinion, such an orbital terminal will be needed to make effective use of the space shuttle, providing power and other mission-enhancing capabilities. Eventually, such a terminal could provide for extended habitation of a more permanent shuttle supplied facility.

We endorsed development of such an evolutionary space platform capability in our mid-year assessment of space policy. We look forward to the completion of the current NASA/DOD studies of space station requirements and architectures. These studies will help identify the proper path to achieve needed capabilities. We are concerned, however, by the absence in FY 1984 of funds to continue community-wide assessment of this program, especially at the systems level. Maintenance of strong government and industry participation is essential to achieving evolutionary space capabilities, both manned and unmannned. Whatever the selected course, this teamwork should be maintained by continuing contractor systems studies.

In short, these comments reflect our view that the advanced programs element should be significantly increased.

In summary, there are six areas in which the AIAA recommends specific additions to the proposed FY 1984 Administration budget:

- Shuttle science payload development
- Planetary research and analysis
- UARS flight support
- Technology utilization
- Research and Technology
- Advanced Space Transportation Programs

In other areas, we also feel that a more aggressive approach is both justified and necessary.

Aeronautics

Now I would like to address NASA's aeronautics program. In November of 1982 the Administration issued its Aeronautical policy paper, which strongly endorsed NASA's role in the government's aeronautical R & T program. The AIAA in turn strongly endorsed the Administration's policy and recommended eight steps to implement the policy, three of which involve NASA's programs. They are:

1) Emphasize, upgrade and integrate NASA's aeronautical R & T functions and activities by establishing a separate aeronautical management structure within NASA in the manner of the earlier NACA.

2) The government should substantially increase NASA's output of aeronautical research & technology.

3) The government should increase support and stimulate industrial assistance for educating high-quality engineers and scientists to meet the future needs of American aeronautical R & D.

In this light, Mr. Chairman, I would now like to address my remarks to NASA's aeronautical budget, which is characterized by a 7% overall increase over FY 83, including a 15% increase in the R & T base programs and a 12% decrease in Systems Technology programs. The Administration has also proposed as a part of the Systems Technology program a $20 million new start in a Numerical Aerodynamic simulation program. In view of the Policy statement, a 7% increase in the budget, which probably means 1% real growth, is surprisingly small.

The AIAA endorses the primary aeronautics program submitted by the Administration in the FY 84 NASA budget. However, we recommend that it be increased by adding important programs and by providing additional funding for some ongoing programs. These changes could require a 20% or greater increase in the budget.

Research and Development

We endorse the new start, a Numerical Aerodynamic Simulation (NAS) program. When this program was first being considered for the FY 1982 budget, Dr. William Reinecke, Chairman of our Fluid Dynamics Technical Committee, speaking on behalf of his and four other technical committees, testified before the House Authorizations Committee that they endorsed the development of the NAS. We are gratified to see this valuable program in the FY 84 budget, and I repeat our earlier endorsement.

In the Research and Technology Base we support increases in a number of programs including:

Materials and Structures R & T - for increased research on advanced materials, composites, and crash dynamics for small to medium aircraft.

Multidisciplinary R & T - funding for university and other grant research should be increased because the nation needs to increase support for education of graduate students to meet future needs.

Propulsion Systems R & T - funding should be increased for research on technologies for large turbine engines and to fund target engine studies.

Rotorcraft R & T - funding should be increased for support of the vertical motion simulator and for low-speed wind tunnel tests for V/STOLS and rotorcraft.

Subsonic Aircraft R & T - funding in this area has been significantly reduced in recent years in spite of a clear need for increased support to offset international competition.

In Systems Technology (ST) programs we believe funding is needed for the following programs:

Subsonic Aircraft ST - Large primary composite structures programs for future aircraft should be supported to develop the technology and the engineering data base that will lead to better certification standards. Composites offer the potential to achieve lighter and more fuel-efficient civil and military aircraft.

Advanced Propulsion ST - The Advanced turbo-prop program, which was not funded this year, is one of the most promising areas that NASA has been pursuing. This program promises valuable benefits for civil transports and military aircraft for high-endurance and long-range missions. It is a highly appropriate technology for NASA to spear-head because the risk, investment, and long term before application place it outside the reach of industry.

Advanced Turbofan Technology Program - We recommend this program as a new initiative for the development of advanced component technology for the next generation of large transport engines. The investment in large engine R & D has a large payoff for the U.S. in foreign trade and fuel consumption.

Research & Program Management - We recommend that the number of aeronautical researchers in NASA be increased by 220 people to provide a stepped-up pace of innovations directly from NASA laboratories. Research, which should be the highest priority NASA function, has decreased and must be substantially improved over the next several years. The personnel added should consist primarily of new hires and should be distributed to increase researchers in theoretical and experimental research.

Construction of Facilities - We recommend funding be provided for modification of the 40 X 20 X 120 wind tunnel at Ames Research Center to permit acoustic testing. There is a major problem in being able to improve the noise characteristics of helicopters and other types of aircraft. The U.S. does not have adequate facilities to do such testing as do France and Germany.

These are our recommendations, Mr. Chairman, and we would be pleased to answer any questions you may have.

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

STATEMENT OF JAMES L. REEDER, JR., PRESIDENT, NATIONAL APARTMENT ASSOCIATION

ACCOMPANIED BY:
SCOTT SLESINGER, EXECUTIVE VICE PRESIDENT
COLLEEN FISHER, DIRECTOR OF GOVERNMENTAL RELATIONS,

Senator GARN. Next, I would like to invite James L. Reeder, Jr., president; Scott Slesinger, executive vice president; and another familiar face, Colleen Fisher. If you would like to come up here and ask yourselves a question.

Ms. FISHER. Thank you, Mr. Chairman.

Senator GARN. We would be happy to let you do that.

Please proceed.

Mr. REEDER. Mr. Chairman, my name is James L. Reeder, Jr. I am president of the California based Glenmoore Properties Co.

I am also serving in the capacity in 1983 as president of the National Apartment Association, and as president of this association, I am testifying on behalf of our membership which includes over 45,000 owners, developers, builders, and managers of multifamily housing throughout the Nation.

The National Apartment Association is a trade association exclusively representing the multifamily housing industry. Accompanying me today are our executive vice president, Mr. Scott Slesinger, whom you have readily recognized, and, of course, our director of government relations, Miss Colleen Fisher.

Mr. Chairman, before I begin my discussion of the HUD appropriations bill for fiscal 1984, I would like to take just a moment to present just a general overview of rental housing market in our country.

I would like to call to your attention, aside from my remarks just for a moment, and remind those present of what we feel to be the critical nature of rental housing in this country. That is, it is very well demonstrated and documented throughout the Nation that nearly half of our country or population resides in rental housing.

I think oftentimes it serves a fine purpose to underscore that so people realize how critical it is when you especially talk about new production programs.

The number of starts over the past few years has been at depression levels. Last year, abandonment and demolitions surpassed new starts. Despite the current upturn in the economy, rental construction is at a fairly low level. There is minimal construction activity in the Midwest and Northeast, where over 40 percent of the rental stock is already over 50 years old.

Although the demographics point to an increasing demand for apartments, this does not mean such housing will be built. We sell a product that could be purchased by everyone, but, obviously, some cannot afford it.

Over the past few years of record high interest rates, there has been significant demand for rental housing, but financing costs have been so high that we have been unable to build affordable rental units. Furthermore, no matter how low interest rates may decline, a significant sector of the rental market will still find only substandard housing available.

To remedy the situation I have just outlined for you, a special commitment from both the private sector and Federal Government is needed to house these people.

I would like to highlight, if I can, just one private-sector undertaking that I think is worthy of note.

We are proud of one initiative in the private sector begun by our Houston affiliate. This program, termed "A Helping Hand," was formally announced by Vice President Bush in Houston on April 8, 1983.

Under the program, owners of apartments designate units to be made available for families on the public housing waiting list, as well as residents currently living in public housing in Houston. The program will initially provide 200 privately owned apartment units for such residents.

Residents participating in A Helping Hand will pay 15 percent of their gross monthly income as rent, as opposed to the 27 percent normally paid in Government programs. The Houston Apartment Association agreed upon the 12-percent allowance in order to assist residents with utility costs.

It is estimated that the program will save the Federal Government approximately $51 million over a 40-year period. Figures based on the program's first 200 units have shown estimated savings of $11 million in new construction and more than $40 million in operating costs over approximately a 20- or 40-year span, depending on the methods used in calculating the operating deficits.

I would like to step away, with your permission, Mr. Chairman, for just a moment from my prepared remarks, and ask that these be in their total submitted for the record, if I might, and then just from this point on, highlight a few of those areas of concern.

Senator GARN. They will be included.

Mr. REEDER. Thank you.

Let me speak, if I can, in philosophical terms about their association and underscore where we are coming from.

In essence, we support changes in housing and the Government's role therein that result in the use of existing housing stock, avoiding Hud's and the Federal Government's need to commit to long-term obligations.

I think we are all aware of some of the drastic consequences that have built and come upon our backs in the years to date. Simultaneously, we support actions that result in more action in the private sector, recognizing that this ultimately is the only way to keep rents down for the consumer.

There has to be a supply and demand factor in the marketplace, in order to keep it down in the long term. However, there are some areas that do require, we believe, legitimate Federal involvement, and that is financial involvement.

This morning, we are here to address, really, only about 10 percent of the total appropriation that is being discussed. That falls fiscally into only two areas, that being No. 1, the voucher program, and No. 2, a relatively, in our opinion, modest production program for your consideration.

Currently, under S. 644, I believe it is, we are looking at an authorization of about $1.2 billion in the voucher program, representing about 60,000 units. We support the voucher program and encourage that it be applied specifically to existing rental stock.

We are hopeful that with a reasonable number of vouchers available—and I would call your attention again to the House HUD subcommittee recommendation, as I recall, of 25,000 units for that program. We think that is a little bit short inasmuch as perhaps 60,000 units would demonstrate to the private sector some reliance or justification for private owners and developers, such as myself, getting involved in rehabilitation and new construction.

Without some type of reliance upon the continuance of these modest voucher programs, many people are going to be afraid to commit to longer term rehab programs. Ultimately, as I said earlier, this should lead to new construction. Again, in the private sector, that will provide the needed supply and keep rents down due to supply and demand factors.

Second of all, our attention, as far as fiscal concerns go, addresses the public housing shortage nationwide through this very, very modest production program. As we foresee it, and as provided for in the authorization, there is about $300 million for a startup program; actually, out of a total of about $13.1 billion in your appropriations consideration now, we are really only talking about 2.5 percent of the total appropriation.

I think it is important to underscore the fact that this modest startup program will: No. 1, address shortages that do, in fact, exist in public housing across this country. And, certainly, I think it is interesting to note that even though there is as much as a 20-percent vacancy factor in areas such as Houston, there had to be an initiative from the private sector to provide, through this helping-hand program, mentioned right in the beginning, there had to be that type of impetus to take care of the housing sector.

So our concern is, again, No. 1, that there is a legitimate need out there across the country for modest public housing or a need to address the public housing shortage; and second, I think this program is important because it doesn't create a long-term commitment on behalf of the Federal Government.

So we would ask your consideration that this be approved, this appropriation, at the $300 million level.

Finally, I think we would like to address only two other areas, both nonfiscal in nature, as they relate to this housing program, No. 1 being the Public Housing Accreditation Commission which has received some interest in the papers and I think here on the Hill in the last couple of weeks.

Our concern is that as originally proposed, if I recall directly, there were 15 positions on this proposed commission. I understand it has been cut back to 13 positions, and that reflects, primarily, the removal there from of the private sector.

We, ourselves, through the National Apartment Association, have been involved in the management of property, obviously, since our inception way back in 1941. Our concern is that the private sector shares the same management concerns as the public sector and the public housing agencies. And I think, especially in light of the fact that the taxpayers are providing the impetus for the public housing programs, it is key that at least some voice of the private industry be involved in that commission, if, in fact, it is to come to fruition.

So I would ask your consideration that the private sector, specifically the National Apartment Association, be represented on that commission should it come to pass.

Lastly, I think there is an issue that should have some consideration and it happens to be the pet issue that is getting a little bit of interest publicly, including an article in the Washington Post over the last couple of days.

I would like to summarize some comments, if I can, to conclude my presentation.

The bill, as proposed, would require that owners of subsidized housing could not prohibit or prevent any tenant from owning pets or having pets living in or growing in accommodations.

Nothing in this bill would prohibit owners from removing from any project any pet whose conduct is duly undetermined to constitute a hazard to one's health and safety of the occupants in order for the authority to provide rules in proposed language as the committee proposed.

The problem really existed from our perspective in that there were no hearings held on this problem to highlight some of the things that I would like to point out to you at this time.

Unfortunately, it is such a new issue that I think a lot of the problems have not had an opportunity to surface. The language in the bill does not allow owners to require reasonable rules; for example, requiring updated vaccinations or reference to previous landlords on a pet's behavior.

Even Phyllis Wright, I would like to quote, who is vice president for the Animals for a Humane Society, suggested items which we believe are reasonable, and this includes, as I mentioned, neutering, vaccinations and licenses, extra refundable deposits to guardians, problems and damages sustained in the apartment, and so forth.

The other problem is what might be said to be a definition of "duly determined."

As we all know, having been around legal issues, especially as they relate to real estate, we are constantly faced with the problem of determining what those who drafted legislation really meant.

The phrase, "duly determined" smacks to us as one that is going to create a lot of interpretive problems. The reason, I think, this is important, if I can finish, then, to this committee is that No. 1, this committee does not pass off authorizing legislation; it just appropriates the money. This requirement about pets may lead to the diminution in value of these projects; more garages which may be owned by HUD or secured by HUD would be put in jeopardy. Despite its novel sounding language, without some reasonable controls this could be very expensive legislation. It is not right to have legislation without hearings, and I would ask that this be stricken from this particular piece at this particular time.

Mr. Chairman, I think that summarizes my comments for today and pulls out the more salient points, and I would be happy to answer any questions for you.

Senator GARN. Do I understand your position to be that the housing voucher program is sufficiently well understood to be funded in lieu of the section 8 program?

Mr. REEDER. Yes, sir; by those of us administering the program, yes.

Senator GARN. Better tell Senator Armstrong that before we get to the floor. [Laughter.]

I have no other verbal questions. I do have 761 pages of written questions [laughter] for Colleen to answer in her spare time.

Mr. REEDER. She will have them to you by 5 p.m. [Laughter.]

Senator GARN. Thank you, very much.

We appreciate it.

Mr. REEDER. Thank you.

[The statement follows:]

Statement of James L. Reeder, Jr., President, National Apartment Association

My name is James L. Reeder, Jr., and I am President of the California based Glenmoor Properties Company. I am also the President of the National Apartment Association, and as President of this Association, I am testifying on behalf of our membership which includes over 45,000 owners, developers, builders, and managers of multifamily housing throughout the nation. The National Apartment Association is a trade association exclusively representing the multifamily housing industry. Accompanying me today are the NAA's Executive Vice President, Scott Slesinger, and our Director of Government Relations, Colleen Fisher.

Mr. Chairman, before I begin my discussion of the HUD appropriations bill for FY 84, I would like to present a general overview of the State of the rental housing market in our country.

The number of starts over the past few years has been at depression levels. Last year, abandonment and demolitions surpassed new starts. Despite the current upturn in the economy, rental construction is at a fairly low level. There is minimal construction activity in the Mid-West and North-East, where over 40 percent of the rental stock is already over 50 years old. Although the demographics point to an increasing demand for apartments, this does not mean such housing will be built. We sell a product that could be purchased by everyone, but obviously some cannot afford it. Over the past few years of record high interest rates, there has been significant demand for rental housing, but financing costs have been so high that we have been unable to build affordable rental units. Furthermore, no matter how low interest rates may decline, a significant sector of the rental market will still find only substandard housing available.

To remedy the situation I've just outlined for you, a special commitment from both the private sector and federal government is needed to house these people.

We are proud of one initiative in the private sector begun by our Houston Affiliate. This program, termed "A Helping Hand," was formally announced by Vice President Bush in Houston on April 8, 1983. Under the program, owners of apartments designate units to be made available for families on the public housing waiting list, as well as residents currently living in public housing in Houston. The program will initially provide 200 privately owned apartment units for such residents.

Residents participating in "A Helping Hand" will pay 15 percent of their gross monthly income as rent, as opposed to the 27 percent normally paid in government programs. The Houston Apartment Association agreed upon the 12 percent allowance in order to assist residents with utility costs.

It is estimated that the program will save the federal government approximately $51 million over a 40-year period. Figures based on the program's first 200 units have shown estimated savings of $11 million in new construction and more than $40 million in operating costs over approximately a 20- or 40-year span.

If this program is successful, I am certain that other apartment associations around the country will begin to make plans for implementing the program on a national basis.

However, the private sector alone cannot afford to meet the needs of all low-income families. We need federal assistance if we are to continue our commitment to our nation's poor. What I will discuss in the next few minutes is our Association's views of how your Committee can provide this assistance. Rather than constructing new Section 8 or public housing which like private rental housing has become very expensive to build, the National Apartment Association believes that sheltering low-income families in existing rental housing has been proven to be the most efficient solution to housing the poor. Therefore, we support the Senate's housing authorization bill which would target assistance to the existing rental housing stock through a modified Section 8 housing certificate or voucher program. While we believe that the House HUD-Independent Agencies Appropriations Subcommittee's recommendation of providing $312,500,000 for 25,000 vouchers in FY 84 is an indication of Congress' willingness to look at alternative programs for housing our nations's low-income families, we do not agree that the program should be funded on a pilot basis nor do we believe that the level recommended by the House will allow the program to work properly. It is vital that vouchers be made available in sufficient volume, amount, and duration so that private owners and developers can rely on these vouchers to justify rehabilitation and new construction. Therefore, Mr. Chairman, we would recommend that your Committee appropriate sufficient funding for the 60,000 vouchers authorized under S.644.

In certain areas of the country the need for new construction and substantial rehabilitation is necessary to meet the shelter needs of the rental market even though privately financed projects are not feasible. We believe that the multifamily housing production program, as authorized in S. 644, may be a step in alleviating some of the problems which developers, owners, and tenants of rental housing currently face. That program would give one time assistance to developers to build projects with 20 percent of the units dedicated to low-income families. We oppose the actions of the House HUD-Independent Agencies Appropriations Subcommittee in not providing funding for the program within the $12.9 billion in new budget authority the Committee has recommended for assisted housing. Instead, we would urge your Committee to appropriate $300 million in budget authority for the program in FY 84 --- the level authorized in S. 644, the Senate's housing bill.

In addition to moving public housing projects in the pipeline to construction, one of the other concerns of your Committee during the last two years has been how to deal with public housing operating subsidies. Public housing authorities face many of the same operating costs as owners of private rental housing. Our Association has educated thousands of property managers for public and private housing, and we have offered the services of our members to make the management of public housing more efficient.

We believe that the Public Housing Accreditation Commission authorized in S. 644 will help authorities improve management and reduce operating costs. As you know, our Association was to be a member of the Commission when S. 644 was originally drafted. However, the bill as reported from the Committee no longer includes us as a member of the Commission. We are disappointed by the Committee's decision because we believe the idea of management audits of public housing authorities by private experts will give more credence to the recommendations of the Commission. However, we continue to support the idea of an Accreditation Commission and will be happy to work with the Commission and HUD in developing management reforms for public housing that will lead to a need for smaller operating subsidies in the future.

We must point out that Section 316 in S. 644, which would prohibit the allocation of federal funds to public rental housing projects for the elderly and handicapped if that housing banned pets, will if not amended, adversely effect the fiscal integrity of certain government subsidized housing. Your Committee will also be faced with having to provide additional funds to these projects to help owners and managers meet increases in maintenance and operation costs. In addition, the language in Section 316(c) is too broad. In private housing, rules on pets are detailed --- not just to protect the property but also the tenants. If that section is not amended --- if property managers do not have the necessary discretion to enforce reasonable rules --- I am afraid the quality of Section 202 housing will suffer.

Finally, our Association recommends that the FHA insurance programs be funded at the President's revised 1983 recommendation of $50.9 billion. The proposal by the Administration to reduce the FHA mortgage insurance to $39.8 billion in FY 84 will cut the supply of mortgage credit since the demand for FHA mortgages for single and multifamily programs has grown dramatically with the recovery. At the same time, however we believe there is no economic value to having any ceiling on FHA insurance. These programs are essential and profit making for the government and should not be subject to arbitrary limits.

This concludes my statement. Thank you for the opportunity to express the views of the National Apartment Association. I will be happy to answer any questions you may have.

HOUSTON APARTMENT ASSOCIATION NEWS RELEASE

HOUSTON - Vice President George Bush announced today the beginning of "A Helping Hand" program sponsored by the Houston Apartment Association (HAA). The historical program, unveiled during a vice presidential press conference held at The Houstonian, is the first plan to be initiated by the private sector to house the economically disadvantaged in America.

The Houston Apartment Association's program will initially provide 200 apartment units to house Houstonians on the waiting list of the Housing Authority of the City of Houston. Residents currently residing on Housing Authority properties may also qualify for the program.

The HAA estimates its plan will save the federal government approximately $51 million over a 40 year period. Figures, based on the program's first 200 units, show savings of $11 million in new construction and more than $40 million in operating costs during the 40 year estimated life expectancy of a federally subsidized apartment project.

Vice President Bush said HAA apartment owner members have signed agreements with the local apartment association to donate one or more units per property to the program. The apartment owners have also signed agreements with the Housing Authority of the City of Houston to accept residents on a one year basis. Lease contracts may be renewed at the end of the one year period.

Residents participating in "A Helping Hand" will pay 15 percent of their gross monthly income as rent, as opposed to the 27 percent normally paid in government housing programs. HAA representatives said the 12 percent allowance was given to assist residents with utility costs.

"This program is exactly what the Reagan administration favors," Vice President Bush said. "We feel this fixed income housing program is the signal of a new future for housing America's economically disadvantaged through the private sector."

The National Apartment Association (NAA) announced its support of the Houston program and said it will encourage similar plans on a national basis in cities where there is no rent control.

NAA President James Reeder said the HAA program will be a testing ground. "The initiative we have seen from Houston leads us to believe the program can be implemented nationally. We are certain that apartment associations around the country will be watching the Houston program very closely."

William E. Dinerstein, past president of the Houston Apartment Association and chairman of the HAA Low Income Rental Housing Task Force, spearheaded "A Helping Hand."

"The cooperation exhibited by my peers in the private sector has been incredible," Dinerstein said. "This type of program makes Houston stand out as a pioneer city. People have decided goodwill should outweigh business interests. I think it's terrific."

HAA President Leon Samet added, "We have long recognized the problem of housing Houston's economically disadvantaged residents. We feel that moving them into mainstream America will also raise their economic and social consciousness. We look forward to cooperating with the Housing Authority to make sure the program stays in place. We want "A Helping Hand" to become a framework for progress in our effort to house the citizens of Houston."

"This type of cooperation is exactly what we are looking for," said H.J. Tollett Jr., chairman of the board of Houston's Housing Authority. "Our goal is to improve the quality of life for economically disadvantaged residents. The Houston Apartment Association has paved the way with its exceptional private sector initiative."

Samet added that the HAA program began in December 1981 and units were committed in early 1982.

"Our program is now beginning during the most difficult financial period in our history and when occupancy rates are at an all time low," Samet explained. "These owners will be increasing their expenses without significantly increasing their income."

He then praised his membership for continuing with the program during more difficult times.

Governor Mark White issued a statement in which he commended the efforts of the Houston Apartment Association. "The project, aptly named 'A Helping Hand,' is an excellent example of what can be accomplished when we all work together to share and to help take care of our neighbors in times of need. I wholeheartedly support this effort and hope it is only the beginning of such projects throughout Texas and the rest of the nation," Governor White said.

Houston Mayor Kathryn Whitmire was equally supportive. "Today's announcement is graphic evidence that a meaningful partnership can be forged between the public and private sectors," she said. "Houston's shortage of public housing will be partially addressed by today's announcement, but more importantly, an example is being set and a challenge made for additional initiatives. I congratulate the Houston Apartment Association for recognizing that it has an obligation to return something to the city from which it gains its livelihood, and further commend the Houston Housing Authority for its cooperation in making this nationally-unique program a success."

TEXAS APARTMENT ASSOCIATION RESOLUTION

ENDORSING HOUSTON APARTMENT ASSOCIATION'S LOW INCOME RENTAL HOUSING TASK FORCE PROGRAM

BE IT RESOLVED, that the Texas Apartment Association endorses the work that the Houston Apartment Association has done in the development of a program that will supply private rental housing for low income people and at no additional expense to any local, state or federal governmental agency and to their respective taxpayers.

BE IT FURTHER RESOLVED, that the Texas Apartment Association commends and applauds the efforts of the Houston Apartment Association for its willingness to take the time, energy and finances to address this most critical national problem for all citizens of this country.

March 7, 1983

DLarry Thoma

D. Larry Thomas, CPM
President, Texas Apartment Assn.

NATIONAL APARTMENT ASSOCIATION RESOLUTION

BE IT RESOLVED that the National Apartment Association supports the efforts of the Houston Apartment Association in developing a method of supplying private rental housing for low income people at no additional expense by any local, state or federal agencies and their respective tax payers.

BE IT FURTHER RESOLVED that the National Apartment Association commends the efforts of the Houston Apartment Association for its efforts to address this most critical problem for all Americans.

Passed at the National Apartment Association Board of Directors meeting February 26, 1983 in Scottsdale, Arizona.

"A HELPING HAND"

1. The Housing Authority of the City of Houston (HACH) shall select participants for the program from the applicants on the waiting list and residents presently occupying HACH owned and operated units, utilizing established selection criteria.

2. Selected participants shall be counseled regarding the terms and conditions of the lease agreement applicable to sponsored units and the rules and regulations covering participation in the program.

3. Selected participants shall be issued a Certificate of Participation and the owner's name and property address of the available Houston Apartment Association (HAA) sponsored unit, which shall state: (1) the amount of rent that the resident shall be obligated to pay, (2) the names of all occupants of the household, (3) the ages of all minors in the household, and (4) the size of the unit needed by the resident.

4. The Director of Housing Management of the HACH shall refer selected participants, with their certificates of participation, to the owner or his respective agent for their review and final approval according to their standard screening procedures.

5. Resident participants and the owner or his respective agent shall enter into a lease agreement.

6. Resident participant shall be obligated to abide by all rules, policies and regulations that apply to the operation of the respective apartment complexes.

7. In the event of a sale of a participating apartment project during the term of the program, the owner/management company will have the right to terminate any lease with a resident participant upon sixty (60) days notice to the resident participant and HACH.

8. The HACH agrees to monitor all particpants in the program to assure timely payments of rent, adherence to all applicable policies, rules and regulations, and the successful assimilation of the resident participant into the new environment. In order to accomplish this, owner or owner's agent shall provide the Director of Housing Management of the HACH a monthly report outlining all problems relating to the occupancy of the resident participant and the corrected action expected.

9. Each resident participant shall be responsible for the payment of any deposits and monthly service charge for utilities and telephones.

10. If resident fails to pay rent or other amount owed by resident under the lease agreement, or if resident, his guests, or other occupants violate the lease or owner's rules and regulation or applicable federal, state and local laws then owner's representative may terminate resident's right of occupancy by giving resident one day's written notice to vacate indicating the grounds for such termination. A copy of such notice shall also be delivered to the Director of Housing Management for the HACH. However, an owner or owner's agent shall not institute eviction proceedings until the resident particpant has exhausted the grievance procedures and has been advised by the HACH of its determination relative to the resident participant's right to either relocate to a HACH owned and operated unit or retain his position on the waiting list.

11. **Within three (3) days of receipt of the notice to vacate, the HACH shall notify resident participant in writing as to whether the grounds indicated by owner or owner's agent for such termination warrants that resident participant forfeit his right to relocate to a HACH owned or operated unit or to retain his position on the HACH conventional public housing waiting list. This notice shall state that resident participant has three (3) days in which to request an informal hearing with the Director of Housing Management of the HACH or to provide written comments and objections to the Director of Housing Management of HACH.**

12. Within five (5) days of either the receipt of the written comments of the resident participant or the informal hearing, the Director of Housing Management of the HACH shall notify the Resident Participant of its determination as to the right of the resident participant to either relocate to a HACH owned or operated unit or to retain his position on the HACH conventional public housing waiting list. If the resident participant's occupancy is being terminated through no fault of the resident participant, this notice shall be provided within five (5) days of receipt of the notice to vacate by HACH. The Director of Housing Management of HACH shall notify the owner or owner's agent that a determination has been made so that eviction proceedings can be instituted.

COSTS ASSOCIATED WITH HYPOTHETICAL 200-UNIT DEVELOPMENT*

DEVELOPMENT COST	PER UNIT ($)	200 UNITS
(1) Cost to build and HACH Administrative expenses:	$ 54,137.05	$ 10,827,410
(2) Annual contributions by HUD to repay loan of funds for item (1) over 40-year life of loan:	3,885.42	777,084
(3) Total amount paid out in 40 years:	155,416.80	31,083,360
ANNUAL OPERATING COST		
(4) Operating expenses $163.22 (per unit per mo.):	1,958.64	391,728
(5) Federal Subsidy $95.42 (per unit per mo.):	1,145.04	229,008

SAVINGS TO FEDERAL GOVERNMENT OVER 40-YEAR LIFE, ASSUMING NO MODERNIZATION AND LEVEL OPERATING SUBSIDY:

Item (2)	3,885.42	777,084
+ Item (5)	1,145.04	229,008
	$ 5,030.46	$ 1,006,092
x 40 years	x 40	x 40
	$ 201,218.40	$ 40,243,680

**Costs based on figures compiled by the Houston Housing Authority for the Houston Apartment Association.*

SUBCOMMITTEE RECESS

Senator GARN. The committee will stand in recess until 1:30, when we will continue the hearings of public witnesses.

[Whereupon, at 11:40 a.m., the subcommittee was recessed, to reconvene at 1:30 p.m. the same day.]

(AFTERNOON SESSION, 1:30 P.M., TUESDAY, MAY 24, 1983)

NONDEPARTMENTAL WITNESSES

STATEMENT OF GENE BREWER, PRESIDENT, NATIONAL INSTITUTE OF BUILDING SCIENCES

ACCOMPANIED BY ROBERT DILLON, VICE PRESIDENT, NATIONAL INSTITUTE OF BUILDING SCIENCES

Senator GARN. The subcommittee will come to order.

Our first witness this afternoon is Mr. Robert Dillon, vice president of the National Institute of Building Sciences.

It is nice to have you before the subcommittee again. Please proceed.

Mr. DILLON. Mr. Chairman, our testimony will be presented by the president of the institute, Mr. Gene Brewer.

Mr. BREWER. Good afternoon, Mr. Chairman.

I am sitting in for Chairman Hawkins, who sends his regrets. He had to stay in Phoenix to run his business. He has been spending a lot of time there and just couldn't get back today.

Let me thank you on behalf of the board and the entire institute for allowing us this chance to speak with you. During this past year, the institute has testified before a number of House and Senate committees on housing issues and land development topics, but this is the only chance we have to tell you about what we have done and our plans for the future.

First, let me provide for you and other members of the subcommittee our annual report to the president. We have a few copies here, but we will mail each member a copy to be sure they get distributed.

In the report, you will notice that as we indicated last year, the income from all sources didn't come anywhere near the 1981 figure, from $3 million down to about $930,000. This was a sharp decline in our total income and impacted our building in some ways.

As you know, the building industry has been in a downturn, and we didn't escape, because we did have a little bit of loss in some of our membership, although we did maintain our programs to a high degree.

I am going to hit some highlights, Mr. Chairman, in the interests of time, but I would like to talk about some activities in the building energy conservation area, which is still of interest to NIBS and to the Nation.

We have a public-private partnership in our building energy efficiency project which has identified opportunities for the private sector in the already built environment. We are working with a voluntary energy rating system with the Department of Energy to assist lenders in establishing the conservation activities in residential work. We have held a workshop on building energy controls with some of the national labs, and one of the important things we did last year was to assist the private sector, as a good example of a public-private partnership, in creating the Building Thermal Envelope Coordinating Council.

This council is composed of representatives of all of the public sector and private sector involvement. Its purpose will be to identify research needs and coordinate the research work so that the best can be done; we can fill the gaps and be sure all the money will be spent wisely.

This will be in concert with the public sector, too, so we can eliminate duplication in this area. That is scheduled to have its first annual meeting June 7.

As you know, we have done a lot of work in nationalizing the building regulatory process. We have had to annual reports indicating where there was overlap and conflict between agencies and between public and private sector.

We have turned in several reports to you in that regard. We turned in the cost-benefit risk analysis which Senator Laxalt asked for last year, and I think I have had copies of that since.

One of the main missions for the institute as set forth in the legislation is to accelerate the introduction of new technology into the system, and we are involved right now and are well underway in a major program to examine all the systems across the country, both regulatory and nonregulatory, that impact the introduction of technology.

Out of that, we expect to make recommendations of a nationwide system or systems that would remove barriers and accelerate technological development and certification.

With respect to housing issues, we hosted a housing technology conference last year, cosponsored with HUD, that was quite successful. We had about 200 people at the meeting. The meeting brought forth many recommendations to pursue which have been passed onto HUD, of course, and some of those are being pursued now.

We did a small contract, you may remember, with HUD to identify the national housing research agenda. That wasn't near the level of effort that we expected or you expected, but we do hope to come back to HUD and continue that work with them.

Also, in respect to housing, I think in March 1983, Senate hearings were held on HUD authorizations, and there was some indication that members of the committee were having some difficulty with identifying housing needs with respect to location and occupancy and the addition of the Federal-assisted housing.

We would like to contribute to that work, particularly the resolution of the problems in regard to housing inventory survey and housing needs.

We would welcome the interest of your committee in this endeavor, because we think we can help in that regard.

A new area cropped up last year of immense interest to the building community, and that is the matter of the toxic effects of building fires. We have known for a long time that smoke was toxic, but in recent years there has been much more interest and effort in identifying the degree of toxicity.

We became interested early last year when several jurisdictions were introducing regulations into the law impacting construction materials which had no sound scientific basis. There was no way to measure toxicity or to evaluate what happened in a fire. So we asked those jurisdictions—New York City and California, in particular—to withhold on regulatory action until we could complete a state-of-the-art study, which has now been completed.

We have distributed it to several States considering legislation. We sent you a copy in the report, and we have some additional copies that will serve as a starting point to determine what to do next on this matter.

It touches upon a wider subject, and it has to do with a concern about toxic chemicals and regulating in the face of scientific uncertainty. I think that is going to be a growing problem with respect to society and certainly with respect to furnishings and equipment that go into buildings, particularly in public buildings.

Closely related to that is the issue of indoor air quality. We have done some work, as you will recall, with EPA to get started in identifying generic materials. There is much more work to be done in that area. We are talking with the EPA people to see how we can assist in ascertaining the difficulty with indoor air quality and, of course, making recommendations to solve those issues.

In fact, we have just been contacted by the New York City Housing Authority. They had done such a good job of closing up their buildings; they now have a very serious moisture and mildew problem, so it is a tradeoff here.

While you cure one problem, you have created another one. Those are the kinds of issues that we have to deal with.

With FEMA, we also have some important work going on. One you will recall was a partnership between the public and private sector on the seismic issues. Those scientists are well underway with a second set of cities to be examined.

The private organizations involved and FEMA are quite pleased with this program, and that is moving ahead pretty much on plan.

In addition, we have done small contracts. We went to identify and to work out recommendations to develop a desired performance criteria for both building user needs and the public health and safety concerns, and that will, hopefully, be an ongoing program with FEMA.

That will help us achieve some rationale in building relations where several health and safety factors all come together on impact of design, and we have to be careful that we don't overdesign or we will have a building so costly we won't be able to build it.

So those things really need to be sorted out, and we hope to help FEMA on that. There are lots of other details, Mr. Chairman, but those issues are covered pretty well in the annual report.

We took the format this year of using issues and answers. Here is the issue; what are you going to do about it? So you have the problem and our recommended solution in there. I think that will give you some insight into not only what we did, but how we did it. That is to pull the public and the private sector together and address the problems from the public point of view, what we do for the public, and it is working.

I want to tell you, too, that the private sector has expressed to us many times appreciation for Congress providing the vehicle for the private sector to get together with public people and develop solutions to the problems that continue to vex us in the building area.

I thought you would like to know the private sector appreciates that opportunity.

Senator GARN. Thank you, very much.

Were you through?

Mr. DILLON. No. I wanted to speak if I could a little bit about our financial situation. The private sector has contributed very generously.

Senator GARN. If you will do it briefly, we are on such a tight time schedule. I took 2 minutes of your time by being late, but we are still a little bit over.

Mr. DILLON. I will cover it very briefly.

We have embarked on a very sensitive campaign, and have been for the last few months, to go to the private sector and get substantial funding beyond their voluntary input from their people. We have a good start on it.

Our target is $750,000, which we are going out with 3-year pledges. I think this year we will probably make in the neighborhood of about $400,000. I have about $2,000 in hand right now. We may exceed $400,000. The result of that will be a difficult financial situation for us. We will have a shortfall somewhere in the neighborhood, under current circumstances, as we see it, of about $600,000.

Anything that you can devise that would be of assistance, we would certainly appreciate it, and we stand ready to follow any suggestion you may have.

That is about the size of that, but the institute is dedicated, Mr. Chairman, to the goals that have been set for it. We naturally have to address the timely issues of the day, but our eye is also on the long-range target which is to harmonize and rationalize this whole building picture. We have made a good start, but we have got lots left to do.

Senator GARN. I understand your problem with speculating and your shortfall of $600,000. I am glad the various agencies worked with you, even though not to the extent that you would like them to.

I will again ask them to coordinate and help you as much as possible. I would appreciate it if you would continue to work with the subcommittee staff to identify the appropriate study area.

Mr. DILLON. I think there is a much better climate this year, because the work we did last year sort of broke the ice and they are confortable with us and they are confident that we can do the job.

We appreciate your assistance.

Senator GARN. Thank you, very much.

[The statement follows:]

STATEMENT OF GENE BREWER, PRESIDENT, NATIONAL INSTITUTE OF BUILDING SCIENCES

Mr. Chairman, once again, I would like to thank you on behalf of the Institute's Board of Directors and the more than 800 members of our Consultative Council--both public and private--for giving us the opportunity to appear before your Subcommittee. During this past year, the Institute has testified before a number of House and Senate committees on specific housing, building, and land development topics, but, as you know, this is the only opportunity we have to report on the totality of our activities and to tell you of our plans for the future.

First, I would like to provide you and the other members of the Subcommittee with our Annual Report to the President of the United States for fiscal year 1982. This report is transmitted to the Congress by the President as a requirement of the Institute's authorizing legislation; however, we would like each member of your Subcommittee to have a copy.

In this Annual Report you will find that, as we predicted when appearing before you last year, our income in FY 1982 from other than appropriations did not approach the $3,108,644 of FY 81. Instead it was only $939,520 from non-appropriated fund sources, a decline of nearly 70 percent. As we had noted, the Institute did not expect to be immune from the effects of the depressed state of the economy and the disproportionate impact the recession was having on housing and building--and, indeed, it did not escape. Even so the Institute was, because of its FY 82 appropriation, able to sustain what we feel has been a positive contribution to housing and building progress. For example:

1. In the area of energy conservation:
   - our Building Energy Committee of some 100 agency, corporate and individual members (formerly the Thermal Insulation Committee), pursued such issues as indoor air quality, toxicity of insulation materials, and, or course, the effective use of insulation and other energy-conserving techniques;
   - a Building Energy Efficiency Project, with government, business, and labor support, focused on a systematic analysis of market-

place opportunities that, if pursued, can provide a positive response to the national goals of energy self-sufficiency;

- a Voluntary Energy Rating System Project has been initiated to determine the potential benefits and problems associated with energy rating systems--i.e., systems for rating the potential performance of housing and buildings from an energy utilization standpoint;
- a Workshop on Building Energy Control Systems was held; and
- a Building Thermal Envelope Coordinating Council was formed under NIBS auspices, to bring together the public and private sectors of the building community to create a national agenda for research and development concerning the thermal envelope of buildings, and to achieve cooperation in the pursuit of identified research needs, particularly those of a fundamental and non-proprietary nature.

2. In the area of rationalizing the building regulatory process, you are familiar with the basic report of the Institute issued in 1982 on overlap, conflict, and duplication in building codes and related building regulations, including regulations of the Federal Government. The Institute is continuing this effort. One of its special efforts concerns the current conflicts in regulations generated by building official and fire official regulation of the same facilities, particularly health care facilities. This is a matter of sorting out roles so as to harmonize regulatory activity.

   One aspect of this program is the development of an acceptable cost-benefit-risk analysis techniques. Senator Laxalt expressed an interest in this program last year and we have since provided him and your Subcommittee with our report on this subject.

3. A major effort has been made to address the Congressional charge to the Institute that a major goal be to become the authoritative nationally recognized institution that provides for the evaluation of new technology so as to facilitate introduction of such innovations and their acceptance at the Federal, State, and local levels. The

Institute has explored this matter since its inception and has now mounted a major program to evolve a nationwide system--not a national system or even necessarily a single system--for technology evaluation and certification. The object clearly is to clarify and accelerate the process of technology introduction.

4. The Institute hosted a housing technology conference co-sponsored by HUD, and, pursuant in part to the expectation of your Subcommittee (Senate Report 97-163), HUD did contract with the Institute to conduct a survey of the housing industry to identify those general areas of building technology where federally supported research can best serve the industry. Unfortunately, HUD did not respond to the broader expectation of the Congress as set forth in Senate Report 97-163 that HUD enter into contractual relations with the Institute to perform a study "...directed to creating a system to annually review and assess the status and progress of HUD's research program and to provide input on the following year's research agenda." However, HUD did agree to allow the Institute to use a portion of the funds under its modest contract with the Institute for the survey ($25,000), to initiate a national housing research agenda. That contract has since expired; however, the Institute intends to do all possible to continue the research agenda effort. In fact, a delphi-type exercise is now underway to refine the list of research priorities and the list of barriers to R&D and new technology applications identified by respondents to the initial survey. Your staff has been provided a copy of our report to HUD and we trust you will have an interest in the product of our continuing work in this area.

Among the key research needs identified during our initial survey were:

- Research--or perhaps more appropriately, data gathering, analysis, and display--that will enable better and more timely forecasts of changes that are taking place in the composition, disposition, and other housing-related characteristics of populations, resources, and capital; and

- Research that will quantify the physical, functional, social, and economic performance of housing--i.e., what is and what is not working and why.

During the March 8, 1983, Senate hearing on HUD authorizations, our staff noted that the members of the Committee were having problems with identifying housing needs and ascertaining the location, occupancy, and condition of federally assisted housing that is intended to address these needs for various segments of the population. It is our hope that we can contribute to the resolution of these problems by seeing what can be done to sharpen the housing inventory survey, and housing need and demand prediction techniques. We would welcome the interest of your Committee in this endeavor.

5. Another area of intense interest and Institute activity, is the life and health threatening effects of toxic smoke and gases released during building fires. Efforts are being made around the country to regulate the use of materials in buildings on the basis of their potential fire involvement and subsequent toxicity. Unfortunately, the state of our knowledge in this regard simply is not adequate to the task, and precipitous regulatory actions in the absence of needed knowledge could needlessly ban major materials groups from building altogether. The search for answers to this dilemma will be difficult because of the highly charged atmosphere. It is our hope that both the EPA and CPSC will work with the Institute in seeking a resolution of the problem. A copy of our state of the art report is attached to this statement.

Closely related, is the issue of indoor air quality. You will recall that your Subcommittee asked the Institute to address this question as well, by calling upon EPA in Senate Report 97-163 to enter into contractual arrangements with the Institute. EPA did so, however, it was only able to provide $35,000 for the effort in FY 82, and then only to identify generic materials commonly used since 1970 in the construction of office buildings, houses for the elderly, and schools, so that EPA could consider such information in the design of indoor air monitoring studies. The Institute hopes, of course, that EPA will have the ability to go much further in working with the Institute to resolve this troublesome problem, brought about in part by making structures, including housing, so much "tighter" for energy conservation purposes.

And, in another corollary effort, the Institute worked with the Armed Forces Pest Control Board and Velsicol Chemical Company in reinstituting the long dormant termite and decay workshop. The workshop is a mechanism for the exchange of information on termite and decay control methods, including the use of termiticides that also have the potential for adding to the indoor air quality problem. It seems very likely that this workshop series can be reactivated with both public and private support--the initial workshop in this research effort having been held on September 22-23, 1982, basically with industry support.

6. Finally, the Institute is now well underway with the two studies with FEMA called for in Senate Report 97-163--one on performance criteria for fire safe building design and the other on FEMA's civil defense shelter design criteria. With a small contract from FEMA of just under $25,000, this effort has been directed toward development of a proposal for a program of a scale more in keeping with the need. In fact, in working with FEMA, it has been possible to redirect this program to seeking the development of performance criteria that not only address the mitigation of life and property loss due to the effects of fire and weapons, but the full range of natural and man-made disaster, including earthquakes, wind, flood, and explosions.

> The ultimate goal of the program now is to develop a way to describe desired performance considering both building owner-user needs and public health and safety concerns. A secondary goal is to interrelate the performance criteria for dealing with the different types of hazards in a way that will provide rational relationships between the several types of performance being sought. If this can be done, a tremendous stride will have been taken in achieving rationality not only in building regulation but in the design of buildings for the full range of user needs.
>
> As you know, the Institute also has created a Building Seismic Safety Council under its auspices, and that BSSC is working with FEMA to develop improved earthquake safety provisions. At present this work is focusing on trial designs using already developed tentative provisions to ascertain their technical and economic viability. This work is going well and we will be sure these two separate efforts are harmonized. Your continued interest in this program will also be appreciated.

I wish time permitted me to go on to describe what has been accomplished during the past year and what our plans are for the coming year--hopefully, however, what I have already described, will suffice. Further, you will find most of what I have described here and more, in our Annual Report to the President.

Turning once again to the subject of Institute financing, as I noted at the outset, the Institute has not been immune from the effects of the recession from which the nation is just now emerging. Simply put, the private sector, although it has contributed generously of its time and talents, has not been able to provide the level of general funding needed to support its share of the basic operations of the Institute. And, as you know, the federal agencies also have not come forward with the general support grants that were envisaged by the NIBS authorizing legislation, which could have gone a long way toward demonstrating to the private sector that there is a commitment by government to its share of continued basic support.

The Subcommittee is aware that to enable the Institute to pursue its basic mission tasks requires approximately $1.2 million annually. In FY 1982, membership fees amounted to only $114,000. Comparing FY 81 and 82 membership fees, we find a net decline of nearly 20%, although our 1983 membership figures have stabilized. It must be recognized, however, that membership dues will never support the organization--the obligation to provide service to the members will always be at least equal to the fee income.

When our last appropriation was approved in 1982, $1.44 million was provided to NIBS with the understanding that this was to be its final Congressional appropriation for initial capital funds. We were urged by the Subcommittee to generate as much private money and contract work as possible, and, using the appropriated monies sparingly, to develop a sound and lasting basis of ongoing private and public support. We have not succeeded with this effort. In the face of the worst economic turmoil this industry has seen in forty years, we managed only to stabilize a shrinking membership base and position ourselves for a better tomorrow. This has been an exhaustive effort in itself.

The Institute's economic position entering FY 1984, therefore, will not be good. Although we have initiated an intensive campaign in an attempt to reach an annual level of $750,000 in private support entering FY 1984, it is clear that we will fall short of this goal this fiscal year. Under current circumstances, we are now projecting FY 1984 income from this source of only $400,000. This leaves a shortfall of nearly $800,000, of which only $200,000 can be counted on from dues and other sources, leaving a balance needed of some $600,000 to meet our $1.2 million goal. This clearly is a very serious situation. It goes without saying then, that we would welcome the assistance of your Committee in any way it deems appropriate.

The task set out for the Institute is both important and immensely challenging, but it is one we are firmly committed to accomplishing. Indeed, the private sector has often expressed its appreciation for the instrument the Congress has created for enabling it to provide advice and counsel in shaping public policy on issues that impact the built environment. At the same time, however, it should surprise no one--and least of all the Congress--that those who are ardent supporters of the concept can become reactors when the result is change that affects their vital interests. Yet, virtually every move the Institute makes to carry out its mission causes something, someone, or some institution to move. This must be expected; change, afterall, is essential if our nation is to continue to meet the new challenges posed by greater competition for resources, capital, and markets both at home and abroad, while seeking continued gains in the quality of life, and the course of building science and technology is and will continue to be a major factor in achieving these gains.

As I have said, the Institute has come of age. It is moving ever more quickly and surely to address contemporary issues as they arise, while keeping its eye firmly on the longer range goals of bringing about a more rational regulatory environment and a system for moving new technology into the marketplace much more rapidly within that environment. We sincerely hope you agree.

Thank you, I will be pleased to do my best to answer your questions.

STATEMENT OF ANDREW J. MOONEY, CHAIRMAN, BOARD OF COMMISSIONERS, CHICAGO HOUSING AUTHORITY, ON BEHALF OF THE COUNCIL OF LARGE PUBLIC HOUSING AUTHORITIES

Senator GARN. Next, if we could have come to the witness table, Mr. Andrew J. Mooney, chairman of the board of commissioners, Chicago Housing Authority.

Mr. MOONEY. Good afternoon, Senator Garn, Mr. Berger.

My name is Andrew Mooney. I am chairman of the board of commissioners of the Chicago Housing Authority and formerly its executive director.

I am testifying today on behalf of the Council of Large Housing Authorities, an organization with which I know you are familiar, which includes 35,000 of the largest public housing authorities in the Nation.

Mr. Chairman, I feel a great sense of pride in the type of testimony which I am offering to you today. In previous experiences before Congress, I have been forced to spend much of my time counteracting claims and charges made against the Chicago Housing Authority and describing the positive changes and improvements that we have been making there.

I am pleased to be able to tell you today, however, that HUD has lifted sanctions it had previously applied against us, sanctions which we have maintained were unjustifiable in the first place, and now recognizes the commendable progress which CHA has been making in improving its management systems and bringing a higher quality of housing services to its residents.

To summarize briefly what has happened, in January 1981, the Chicago Housing Authority showed a deficit of $33.6 million which had accumulated over a 5-year period. Since 1981, however, the combination of significant cost controls, management improvements, and new sources of income has permitted CHA not only to continuing operating and delivering services, but to become current in its utility bills and reduce its deficit to $4.9 million at the end of 1982, despite an unprecedented intervention by the press, the public, HUD, and other interest groups. CHA now projects a zero deficit by July of this year and reserve fund by December 1983.

Mr. Chairman, I am attaching to my testimony a summary description of some of the efforts we have undertaken at CHA in order to achieve these results.

Turning now to the Council's national concerns for public housing, I would like to thank you, Senator Garn, as CLPHA has done many times before, for your continuing leadership in the field of public housing. Although this is an area where success has little political visibility and few immediate rewards, we have always been able to rely upon your understanding of an responsibility to this program.

We would also like to thank you for the guidance you have provided to the staff directors for both the authorizing committee and the subcommittee on appropriations, especially Mr. Berger, who has become very fluent in our programs and difficulties.

The council has worked closely with these staff members recently in our efforts to strengthen those parts of the current Senate authorizing bill that provides measures to improve the management of public housing.

While the final form of these measures has not yet been decided, the council has urged that a system be established under which PHA's can assume greater responsibilities themselves for the improvement of public housing management, both at the local level and nationwide.

We have recently submitted, in conjunction with other housing and community development organizations, a statement in support of the peer group review and assistance process. In light of the experience that I and the Chicago Housing Authority have endured for the last 2 years, I find it particularly important to say that housing authorities themselves should be involved in developing and applying standards of improved public housing management and that the unwarranted and punitive approach taken by HUD toward CHA not become a destructive pattern that will be repeated in the case of other PHA's in the future.

This pattern may already be emerging from HUD in its announced plan to study the Cleveland Housing Authority.

The council would also like to endorse the other management incentives provided in the other authorizing bills, such as allowing PHA's to keep funds received from other sources and the regular improvement and refinement of the public housing operating subsidy performance funding system formula.

In Chicago, we have long believed that this formula gives inadequate weight to some of the high costs we face in housing a low-income population in a distressed environment, and it led initially to the deficit that we faced in Chicago.

We look forward to the revisions now directed in the current authorizing bill.

I would like now to print the council's request for fiscal year 1984 appropriations. We support HUD's PFS base calculations with the exception of the amount attributed to counting food stamps as income. These calculations give a figure of $1,535,700,000 as the operating subsidy need for fiscal year 1984. We recognize that there may be a number of legitimate carryovers of surplus funds from fiscal year 1983, but we are asking for a new appropriation of no less than the $1.5 billion level.

Many of HUD's proposed carryovers have not been adequately documented by the Department, but we would like to ask the committee to request further information from HUD justifying these amounts before allowing them to be offset against fiscal year 1984's estimates of subsidy requirements.

In particularly, out of the $69 million in fiscal year 1983 rescissions proposed by HUD but rejected by the Congress, which HUD is now proposing to offset against fiscal year 1984 requirements, nearly half is attributable to interest income which HUD is labeling excess and attempting to recover from PHA's.

There is serious question about the amounts that will actually be recaptured, to say nothing of the question of how much HUD should be allowed to recapture at all.

In addition, HUD very recently begun to project $85 million in added savings for fiscal year 1983 as a result of virtually well-established oil prices, as well as higher than expected increases in fiscal year 1983 PHA income.

Some of these adjustments may be legitimate, Mr. Chairman, but it has been our experience that HUD's numbers need to be very carefully scrutinized before they are accepted. For this reason, we are asking for the fiscal year 1984 appropriation of $1.5 billion and for the continued support of your committee in seeking full and detailed justifications of any adjustments from HUD.

We need honest numbers and ask that you not allow HUD's arbitrariness again to drive us to expensive lawsuits.

I would ask also to point out that last year your committee directed HUD to obligate operating subsidy moneys to PHA's no less than 45 days in advance of the beginning of each PHA's fiscal year base on an approved budget.

The January authorities have now completed nearly 5 months of operation, and the April authority is nearly 2 months, and very few budgets, to your knowledge, have been approved.

This continues to be a concern of the council and of the authorities directly involved.

In the past few days we have had an opportunity to review the recent testimony by the Department of Housing and Urban Development concerning the rate of expenditure of modernization funds by PHA's and find that testimony to be very misleading.

The Department alleged that PHA's had spent only 2 percent of the CIAP moneys authorized for fiscal year 1981 through fiscal year 1983. But the fiscal year 1983 money, of course, won't even be approved by the same department until September 30, 1983, even if the Department maintains its current schedule.

Fiscal year 1982 moneys have only been released by the Department in the form of annual contributions contracts to most PHA's since January 1983 or March 1983, 2 or 4 months ago.

The design process is now just beginning to get underway. Staff of the council have recently undertaken a survey of PHA's that received fiscal year 1981 money for 2-year modernization projects and have found that most of these PHA's have spent 50 to 60 percent of the funds made available and expect to complete the work and the expenditure of funds over the current summer in time to meet the agreed-upon September 30 deadline.

There are exceptions, of course, such as the Chicago Housing Authority, which was not allowed to spend modernization of funds throughout 1982 based on HUD fiats imposed for 11 months during that calendar year.

The council continues to believe, however, that the principal delays in the process of using modernization money are those imposed by HUD itself through its delays in allocating the funds; by continual shifts in priorities and guidelines; inadequate technical staff; and its failure to establish a smoother procedure for advanced planning for projects that have a high probability of being funded in the future.

Although these delays do exist, the public housing modernization program probably moves more rapidly than most other public programs to create the jobs envisioned by this year's stimulus program.

We share this committee's concerns about expediting the process of getting the modernization funds spent and last Friday met with committee staff and with HUD officials to discuss things that HUD has to do to get the allocation of modernization funds speeded up.

We ask that you and your committee not let the programs slow down at this point. We particularly need continuity of funding so that multistage moderinzation programs won't get stopped in the middle halfway down the road. PHA's, like any other business, need to plan their programs on a firm basis.

Mr. Chairman, there is now $2 billion for modernization included in the Senate authorizing bill, and the council strongly supports this number as the appropriations level.

While there are many difficulties in estimating total modernization needs, HUD's recent estimates have pointed out a need for at least $10 billion to $12 billion in loan authority in order to restore the public housing stock to standards of livability.

Many PHA's, such as the Chicago Housing Authority, have major modernization needs as yet unfilled. In fact, in a recent survey at CLPHA, we estimate a total need of some $225 million to bring the buildings to original standards; $143 million of which are for emergency items. Other PHA's can look forward soon to a possible formula replacement for the modernization program as provided in the authorizing bill.

CLPHA also strongly endorses the public housing development. This program has always served an important need but, as you know, public housing waiting lists in many communities are now growing as affordable rental housing becomes scarcer, even to worker families.

Approximately 40 percent of public housing units go to the elderly, who would otherwise be faced with problems of high and rising costs for shelter and energy. The council shares this committee's concern for an efficient development process and reasonable cost standards.

We were disappointed that no units were appropriated last year, but appreciate your efforts to get HUD to move the development pipeline as expeditiously as possible using reasonable cost standards.

We hope that you will be able to approve an appropriation for new development, consistent with the House bill, of 10,000 units. In addition, there are many PHA's, such as the Chicago Housing Authority, who should not continue to build because of enormous modernization needs which exceed the capacity of the CIAP program.

I would, therefore, like to encourage the committee to improve transfers by local PHA's of unused development funds to be used for substantial rehabilitation, especially for the restoration to occupancy of vacant, uninhabitable units.

Thank you, Senator Garn, and members of your staff, for this opportunity to speak to you today.

Senator GARN. Thank you, very much.

I am encouraged by your comments about the improvement of the housing authority. Your comments about HUD not obligating operating subsidy money is somewhat disturbing to me, so I would appreciate it if you would work with the staff and HUD to see if we can resolve that as quickly as possible.

Thank you, very much.

Mr. MOONEY. Thank you.

[The statement follows:]

STATEMENT OF ANDREW J. MOONEY, CHAIRMAN, BOARD OF COMMISSIONERS, CHICAGO HOUSING AUTHORITY

Good afternoon Senator Garn, Committee members, and Committee staff. My name is Andrew Mooney and I am the Chairman of the Board of Commissioners of the Chicago Housing Authority, and formerly the Executive Director of the Chicago Housing Authority. I am testifying today on behalf of the Council of Large Public Housing Authorities (CLPHA), an organization which includes 35 of the largest PHAs in the nation.

Mr. Chairman, I feel a great sense of pleasure in the type of testimony which I am here to offer today. In my previous appearances I have been forced to spend most of my time counter-acting the claims and charges made against the Chicago Housing Authority, and describing the positive changes and improvements that we have been making. I am pleased today to be able to tell you that HUD has lifted the many sanctions it had previously applied against us, sanctions which we think were unjustifiable, and has now recognized the "commendable" progress which the Chicago Housing Authority has been making in improving its management systems and bringing a higher quality of housing services to its residents.

To very briefly summarize what has happened, in January 1981 the Chicago Housing Authority showed a deficit of $33.6 million, which had accumulated over a four-year period. Over the past 24 months the combination of significant cost controls and new sources of income has permitted CHA to continue operating, to deliver services, to become current in its utility bills and to reduce its deficit to $4.9 million despite the unprecedented intervention of the press, the public, HUD and other interest groups which influence PHAs. CHA now projects a zero deficit by July 1983 and a reserve fund by December 1983. Mr. Chairman, I am attaching to my testimony a summary description of some of the efforts we have undertaken in order to achieve these results.

Turning now to the Council's national concerns for public housing, I would like to thank you, Senator Garn, as CLPHA has done many times before, for your continuing leadership in the field of public housing. Although this is an area where success has little political visibility and few immediate rewards, we have always been able to rely upon your sensitivity, understanding and responsibility towards the program. We would also like to thank you for the guidance you have provided to the staff directors for both the Authorizing Committee and the Sub-Committee on Appropriations. The Council has worked closely with these staff members recently in our efforts to strengthen those parts of the current Senate authorizing bill that provide measures to improve the management of public housing. While the final form of these measures has not yet been decided, the Council has urged that a system be established under which PHAs can assume greater responsibilities themselves for the improvement of public housing management, both at the local level and nationwide. We have recently submitted, in conjunction with other housing and community development organizations, a statement in support of the peer group review and assistance process.

In light of the experience that I and the Chicago Housing Authority have gone through during the last two years, I find it particularly important to say that Housing Authorities themselves should be involved in developing and applying standards of improved public housing management, and that the unwarranted and punitive approach taken by HUD toward the Chicago Housing Authority not become a destructive pattern that will be repeated in the case of other PHAs in the future.

The Council would also like to endorse the other management incentives provided in the authorizing bills, such as allowing the PHAs to keep funds received from other sources and the regular improvement and refinement of the public housing operating subsidy Performance Funding System formula. In Chicago we have long believed that this formula gives inadequate weight to some of the high costs we face in housing a low-income population in a distressed environment, and look forward to the revisions directed in the Authorizing Bill.

I would now like to present the Council's requests for FY84 appropriations.

Operating Subsidy. We support HUD's PFS "Base" calculations with the exception of the amount attributed to counting food stamps as income. These calculations give a figure of $1,535,700,000 as the operating subsidy need for FY84:

PFS base, counting food stamps	$1,409,700,000
Food stamp adjustment not allowed	126,000,000
Total operating subsidy need for FY84	$1,535,700,000

We recognize that there may be a number of legitimate carry-overs of surplus funds from FY83, but we are asking for a new appropriation of no less than $1.5 billion.

Many of HUD's proposed carry-overs have not been adequately documented by the Department, and we would like to ask the Committee to request from HUD further information justifying these amounts before allowing them to be offset against FY84 estimates of subsidy requirements. In particular, out of the $69 million in FY83 rescissions proposed by HUD (but rejected by the Congress) which HUD is now proposing to off-set against FY84 requirements, nearly half is attributable to interest income which HUD is labeling "excess" and attempting to recover from PHAs. There is serious question about the amounts that will actually be recaptured, to say nothing of the question of how much HUD should be allowed to recapture.

In addition, HUD has very recently begun to project an $85 million in "added savings" for FY83 as the result of virtually stable oil prices as well as higher-than-expected increases in FY83 PHA income. Some of these adjustments may be legitimate, Mr. Chairman, but it has been our experience that HUD's numbers need to be very carefully scrutinized before they are accepted. We are therefore asking for a FY84 appropriation of $1.5 billion, and the support of your committee in seeking full and detailed justifications of any adjustments from HUD. We need honest numbers, and ask that you not allow HUD's arbitrariness again to drive us to the nastiness and delays of expensive lawsuits.

I would also like to point out that your Committee last year directed HUD to obligate operating subsidy monies to PHAs no less than 45 days in advance of the beginning of each PHA's fiscal year, based upon an approved budget. The January Authorities have now completed nearly five months of operation, and the April Authorities nearly two months, and very few budgets have been approved. This continues to be a concern of the Council and of the Authorities directly involved.

Modernization. In the past few days, we have had an opportunity to review the recent testimony by the Department concerning the rate of expenditure of modernization funds by PHAs, and find it very misleading. The Department alleged that PHAs had spent only 2% of the CIAP monies authorized for FY81, FY82 and FY83. The FY83 money of course won't be approved by the Department until September 30, 1983, even if the Department maintains its current schedule. FY82 monies have only been released by the Department in the form of Annual Contributions Contracts (ACCs) to most PHAs since January-March 1983, two to four months ago, and the design process is just beginning to get underway. Staff of the Council have recently undertaken a survey of PHAs that received FY81 money for two-year modernization projects, however, and have found that most of these PHAs have spent 50% to 60% of the funds made available, and expect to complete the work and the expenditure of funds over the current summer in time to meet the agreed-upon September 30 deadline. There are exceptions, of course, such as the Chicago Housing Authority, which was not allowed to spend modernization funds because of HUD fiats.

The Council continues to believe, however, that the principal delays in the process of using modernization money are those imposed by HUD itself through its delays in allocating the funds; continual shifts in priorities and guidelines; and its failure to establish a smooth procedure for advance planning for projects that have a high probability of being funded in the future. Although these delays do exist, the public housing modernization program probably moves more rapidly than most other public programs to create the jobs envisioned by this year's stimulus program. We share this Committee's concerns about expediting the process of getting the modernization funds spent, and last Friday met with committee staff and with HUD officials to discuss things that HUD has to do to get the allocation of modernization funds speeded up.

(Brief summary of these discussions, as appropriate.)

But we ask that you and your Committee not let the program slow down at this point. We particularly need a continuity of funding, so that multi-stage modernization programs won't get stopped in the middle, later on down the road; and so that PHAs can plan their programs on a foreseeable basis. Most PHAs are only beginning to receive their second year of funding under the CIAP program, and are learning how to overcome the inevitable problems they encountered in establishing the machinery to administer the first year of the CIAP program last year.

Mr. Chairman, there is now $2.0 billion for modernization included in the Senate authorizing bill, and the Council strongly supports this number as the appropriations level. While there are many difficulties in estimating total modernization needs, HUD's recent estimates have pointed out a need for at least $10-12 billion in loan authority, in order to restore the public housing stock to standards of livability. Many PHAs, such as the Chicago Housing Authority, have major modernization needs yet unfilled. Other PHAs can look forward soon to a possible formula replacement for the modernization program, as provided in the Authorizing Bill.

Development. CLPHA also strongly endorses the public housing development program. This program has always served an important need, but as you know public housing waiting lists in many communities are now growing as affordable rental housing becomes scarcer, even to working families. Approximately 40% of public housing units go to the elderly, who would otherwise be faced with the problems of high and rising costs of shelter and energy. The Council shares this committee's concern for an efficient development process and reasonable cost standards. We were disappointed that no units were appropriated last year, but appreciate your efforts to get HUD to move the development pipeline as expeditiously as possible, using reasonable cost standards. We hope that you will be able to approve an appropriation for new development consistent with the House bill (10,000 units).

In addition, there are many PHAs such as the Chicago Housing Authority who can't continue to build but which have enormous modernization needs which exceed the capacity of the CIAP program. I would therefore like to encourage the Committee to approve transfers by local PHAs of unused development funds to be used for substantial rehabilitation, especially for the restoration to occupancy of vacant, uninhabitable units.

Thank you Senator Garn and other members of the committee for this opportunity to speak before you today.

LETTER FROM ANDREW J. MOONEY

May 19, 1983

To: COUNCIL OF LARGE PUBLIC HOUSING AUTHORITIES

From: Andrew J. Mooney

Re: CHA Financial Recovery

The Chicago Housing Authority exists in the same heavily regulated environment in which all public housing authorities exist. It is structured by state and local laws and regulated by the U.S. Department of Housing and Urban Development (at times by HUD Central, Regional and Area offices simultaneously.) Funding is determined by a HUD formula and based on funding levels set by the U.S. Congress. CHA is typical in this respect and in the fact that it must respond to the directives of its Board, the needs of its staff, the inquiries or criticism of the press and the general public, and above all, to the needs of its residents, which it has a federal mandate to serve.

CHA is typical in this respect, yet remarkable in its recent experience with public criticism, deficit spending, drastic cutbacks and, after two arduous years, its financial recovery. By January 1981, CHA, operating in the same milieu as other PHAs, showed a $33.6 million deficit. The deficit accumulated over a four year period, from 1977 to 1981, and was chiefly the result of a Performance Funding System which created and maintained a serious mismatch between PHAs needs and available funding.

But in 1981, CHA also began a course of reform with the objective of reducing costs, increasing productivity, and maintaining services to residents. However, in 1982, what can only be called a hostile study of CHA, commissioned by HUD, was leaked to the press with subsequent headlines in City newspapers and extensive radio and television coverage.

HUD withheld funding, then demanded an enlarged role in the day to day operations of the Authority. The Modernization program at CHA came to a standstill for one year, at HUD's insistence. The state, responsible for CHA's enabling legislation, restructured the Board, and the City, following the new legislative direction from the State, appointed additional Board members. At the request of HUD, the City appointed yet another entity to oversee CHA operations, a management oversight review committee (MCRC).

Despite enough change to throw nearly any Authority into "organizational shock," and despite the extremely adverse working conditions, CHA continued the course of reform it had started in earnest in 1981.

This involved balancing the budget. In 1981, 1982 and 1983, CHA has submitted better than balanced budgets to the U.S. Department of Housing and Urban Development.

A first step in conforming to the new budgets was to reduce spending from the operating budget through low cost or no cost reforms. Clearly, before any investment could be made in long term improvements, cutbacks had to be made. CHA terminated nearly 400 administrative and craft personnel in 1981, and 91 craftspersons in 1982, realizing immediate cumulative savings in those years of $7.7 million. To compensate for the drastic reduction in force, an agreement to create a new semi-skilled position, a Utility Janitor, was negotiated with Chicago's Building Trade Council. This position now performs for CHA a wide variety of tasks which do not require skilled labor.

Materials and supplies were simultaneous targets — $2.7 million was saved in 1981-1982 by strict adherence to new spending controls, monitored by a newly organized Department of Budgets and Financial Planning.

Other organizational changes were made at no cost, to improve productivity and accountability of CHA staff and contractors. Improved monitoring of elevator maintenance contract costs realized $2.7 million savings in 1981-1982, a system for measuring craft performance and productivity was expanded and enforced, and an internal audit arm of the CHA was structured in order to report directly to the Board of Commissioners.

Other plans initiated by CHA have required difficult management decisions with regard to the investment of scarce resources. These investments were made, however, to assure that CHA could meet the goals it had adopted; to conserve resources, increase productivity, increase accountability, and maintain services. For example, the data processing capacity at CHA was sadly lacking until 1981, having neither modern hardware nor software to produce meaningful management reports. CDBG and other funds were invested to upgrade the entire data processing function and CHA now has automated elevator information systems, automated inventory and stock controls, and an automated Modernization accounting system. The installation of an entirely new General Ledger system is imminent, as well as an energy management system, purchasing controls systems, and systems for CHA's Section 8 program and Central Rental Office.

Resources were required not only for hardware, but for the expert staff who upgraded data processing systems. Other investments were made in specialized personnel, including an expansion of CHA's innovative pest control program. The Internal Affairs Department, formerly organized, was expanded to include additional professional auditors; a risk manager was hired to oversee and control insurance procurement costs; a warehouse manager was hired to develop an all new regional stockroom system which limits accessibility to CHA stock, documents stock purchases issues and receipts, provides an auditable paper trail, and increases accountability for all inventory, materials and supplies. An Energy Division was formed, and staffed with a rate analyst and energy engineers who are carefully monitoring utility billings and analyzing CHA's physical plant for energy saving improvements. CHA managed $1.7 million in utility savings in 1982, chiefly due to the efforts of the Energy Division.

A second step in balancing the budget was to identify new sources of income for services and operations. The City of Chicago committed $10.3 million in CDBG and corporate funds in 1982; a very successful application to the State's Department of Commerce and Community Affairs netted $9.4 million in low income energy assistance funds; an application for additional operating subsidy resulted in a $7 million award for costs beyond the Authority's control. Other applications to public and private sources provided such services to residents as a summer learning institute for children and a musical production starring talented young CHA residents.

The combination of significant cost controls and new sources of income has permitted CHA to continue operating, to deliver services, to become current in its utility bills and to reduce its deficit to $4.9 million in just 24 months, despite the unprecedented intervention of the press, the public, HUD and other interest groups which influence PHAs. After two years of vigilance over every dollar of expenditure, and two years of creative problem solving, CHA now projects a zero deficit by July 1983 and a reserve fund by December, 1983.

STATEMENT OF JAMES M. HACKING, ASSISTANT LEGISLATIVE COUNSEL, AMERICAN ASSOCIATION OF RETIRED PERSONS

ACCOMPANIED BY JILL REED, LEGISLATIVE REPRESENTATIVE

Senator GARN. Next, Mr. James M. Hacking, assistant legislative counsel, American Association of Retired Persons.

Mr. HACKING. Thank you, Mr. Chairman.

Accompanying me is Jill Reed, who is one of our legislative representatives and handles housing matters for us.

I would like to submit the association's statement for the record and summarize.

Senator GARN. Certainly.

Mr. HACKING. AARP has long advocated the development of a comprehensive national housing program for elderly Americans and low income people generally; it would be accompanied, of course, by adequate appropriations. One of the essential building blocks of such a comprehensive policy, in our view, is that of the funding for the section 202 program. Currently, 202 has sufficient lending authority to lend about 14,000 units. AARP supports the Ad Hoc Coalition for Housing for the Elderly which calls for 25,000 section 202 units.

Production of 25,000 units would require, it is our understanding, a little over $1 billion in funding. While this figure is far above the current $634.2 million in lending authority, it is substantially above the administration's recommendation of $476 million. We think that section 202 housing is compelling and justified, and it is something we recommend. The association further recommends that the congregate housing services program be funded at $10 million.

Congress established this program to prevent unnecessary institutionalism of elderly and handicapped persons with functional disabilities. The evidence to date indicates that congregate services do help to prevent premature institutionalism, and that helps rekindle resources of both individuals and Government program, resources that would otherwise be absorbed by rapidly rising costs of institutional care. With the advent of public housing, AARP recommends that new construction of low-rent public housing continue to be funded in fiscal year 1984 and that the operating subsidies for public housing already in use be funded as fully as possible.

Over 40 percent of the 1.2 million public housing units were elderly occupied at the end of 1980. About half of these households were members of minority groups. If public housing construction ceases and existing public housing is allowed to deteriorate, increasing numbers of the most poor and vulnerable of the elderly will be denied access to decent housing.

With the demise of new construction under section 8, an alternative form of low-income housing construction becomes, in our view, all the more imperative. Something by way of a substitute is needed. Although the number of low-income elderly renters is growing, existing low income housing stock is shrinking. The private market has never been able to supply this kind of housing without some kind of Federal help. AARP favors more rapid production of section 202 units as I have described earlier, and we also support expansion of the section 8 existing program.

We continue to find the administration's housing voucher plan unacceptable, although under this year's housing voucher proposal, grant subsidies will be permitted to rise with increasing rental costs. Upward adjustments would be budgeted from anticipated attrition in the number of households receiving aid. Thus the assisted population would contract over time despite what is an expanding need.

Further development of the housing voucher concept is essential before it is implemented on any kind of a broad case. That concludes my remarks, Mr. Chairman.

Thank you.

Senator GARN. Thank you very much, and I want to assure you that we will certainly continue to try to target assistance to those who need it the most. I am sure you are well aware that is my attitude, particularly when we have limited funds. Thank you very much for your appearance.

Mr. HACKING. Thank you.

[The statement follows:]

STATEMENT OF JAMES M. HACKING, AMERICAN ASSOCIATION OF RETIRED PERSONS

Mr. Chairman and Members of the Subcommittee, the American Association of Retired Persons welcomes the opportunity to testify on funding for housing for older Americans.

Housing is the number one expenditure for the elderly. Many older Americans spend about one-third of their incomes for housing, and a significant percentage spend substantially more -- especially low-income elderly persons who are unable to live in federally assisted housing.

Older Americans are frequently discovering that they are in practically an impossible housing situation. In recent years, rapidly rising energy costs, property taxes, and maintenance expenses have made it extremely difficult for the elderly to continue to live in their own homes. Yet, they cannot find suitable and affordable alternative housing, such as an apartment.

A few figures illustrate the severity of the situation for low income Older Americans. Among all elderly households with incomes under $2,500, only 7.2% receive federal housing assistence; of those with incomes of $2,500 - 5,000, 14.8%; $5,000 - 7,500, 9.8%; and $7,500 - 10,000, 4.5%. When only very poor elderly renters are considered, less than one third are living in federally assisted housing units.

These unfortunate facts underscore the need for a comprehensive national housing policy for older Americans and for low income people generally, accompanied by adequate appropriations. The Administration's proposals in no way approach such a policy. As in the previous year, the Administration proposes for FY 1984 to eliminate almost all new construction and to rescind billions of dollars already appropriated for construction or rehabilitation of low income housing units.

The Association has a plan to help come to grips with the housing crisis facing so many older Americans. While we fully recognize that our proposals are not a panacea, we believe that these measures represent an important first step in attacking a problem which is otherwise bound to worsen.

A. Section 202 Housing for the Elderly

One of the essential cornerstones in this strategy is adequate funding for Section 202 for the elderly and handicapped. The Administration recommendation of 10,000 units is simply inadequate and is totally unrealistic, given the dimensions of the problem.

Currently, Section 202 has sufficient lending authority to finance about 14,000 units.

AARP fully supports the recommendation of the 24-member Ad Hoc Coalition for Housing for the Elderly, which calls for 25,000 Section 202 units. This measure is designed to implement a key recommendation for the 1981 White House Conference on Aging. Delegates at the conference proposed a 20,000-unit level per year. However, 25,000 units are needed now because construction has fallen below 20,000 per year during the 1980s.

Production of 25,000 units would require, in round numbers, about $1.025 billion. We realize this figure represents a sharp jump from the current $634.2 million in lending authority and is substantially above the Administration's totally inadequate recommendation for $476 million. Nevertheless, the need for additional Section 202 housing is compelling. AARP reaffirms its support for sufficient funding to finance 25,000 Section 202 units. If this cannot be achieved within the present budget, we recommend that at least 20,000 Section 202 units be approved.

B. Congregate Housing Services for the Elderly

The Association further recommends that the congregate housing services program be funded at $10 million. This measure is also supported by the Ad Hoc Coalition for Housing for the Elderly.

Congress established the congregate housing services program in 1978 to prevent unnecessary institutionalization of elderly and handicapped persons with functional disabilities. Preliminary information provides clear and convincing evidence that congregate services help to prevent premature institutionalization.

This program, of course, has important financial dividends because the cost of nursing home care has become enormously burdensome for older Americans, their families, and our nation. A significant proportion of all elderly nursing home residents -- perhaps 15 to 40 percent -- do not need full institutional care. Large numbers simply require basic supportive services, such as meals, housekeeping, or personal care. AARP believes that congregate services are an important element in our nation's housing strategy to improve the quality of life for "at risk" older Americans who may wind up in a nursing home at a significantly higher public expense.

C. Public Housing

The Association recommends that new construction of low-rent public housing continue to be funded in FY 1984, and that operating subsidies for public housing already in use be fully funded. Public housing has been and remains an extremely important source of decent, affordable housing for low income elderly persons -- and particularly those belonging to minority groups.

Over 40% of 1.2 million public housing units were elderly-occupied at the end of 1980, and about half of these households were either Black or belonged to some other minority group. Minority elderly persons, it should be noted, are the most disadvantaged in every respect, but especially in terms of health and income. If public housing construction ceases and existing public housing is allowed to deteriorate, increasing numbers of the poorest and most vulnerable elderly will find themselves homeless.

D. Other Low Income Housing

With the demise of new construction under Section 8, an alternative form of low income housing construction becomes all the more imperative. Some 70 percent of newly constructed Section 8 units are occupied by elderly households. As older Americans grow in numbers and as a proportion of the population, low income elderly renters will constitute a larger portion of the renter population as well. Yet even as the number of low income renters overall is growing, existing low income housing stock is shrinking. The private market has never been able to supply this type of housing without federal help.

AARP favors more rapid production of Section 202 units, as described earlier, and we also support expansion of the Section 8 Existing program. We continue to find the Administration's housing voucher plan unacceptable, however. This proposal would substitute a "housing payment certificate" for the current Section 8 subsidy, geared to a substantially lower payment standard and directed to tenants rather than units. Participants could use this certificate in a unit of their own choice, either paying or pocketing the difference between the unit rent and HUD's rent payment standard -- an option of little value in an area with a shortage of low income units. In an improvement over last year's proposal, rent subsidies would be permitted to rise with increasing rental costs. Upward adjustments, however, would be budgeted from anticipated attrition in the number of households receiving aid. Thus, the assisted population would contract despite expanding need. Further development of the housing voucher concept is essential before it is implemented on any broad scale.

Summary

The serious and worsening housing situation of low income elderly persons calls for a comprehensive national housing policy with adequate appropriations. Fundamental to this policy is a rental housing production program for low income persons that includes specially designed units and services for older Americans.

AARP recommends that $1.025 billion be provided in FY 1984 to construct 25,000 Section 202 units. We also urge that the Congregate Housing Services Program be funded at $10 million. The Association favors continued new construction of public housing at the maximum level possible within the HUD budget, and strongly urges full funding of public housing operating subsidies. We also support expansion of the Section 8 Existing program.

AARP commends this Committee for its continuing support for low-income housing assistance.

STATEMENT OF JOSEPH LADEN, LEGISLATIVE VICE PRESIDENT, PUBLIC HOUSING AUTHORITIES DIRECTORS ASSOCIATION

Senator GARN. Next, if we could call Mr. Joseph Laden, legislative vice president, Public Housing Authorities Directors Association.

Mr. LADEN. Senator Garn, Mr. Berger, I am happy to be here today.

The Public Housing Authorities Directors Association represents nearly 600 of the best managed housing authorities throughout the United States. We are dedicated to providing the best possible management of public housing authorities and to devote our efforts to do everything possible to improve our management capabilities and improve the services available for our tenants.

The vast majority of public housing authorities throughout the United States are well managed but, unfortunately, because of a limited number of cases, the true image of the public housing authorities is not always presented to the public. We, therefore, must devote a substantial amount of our efforts to improving the general image of public housing management.

We recognize the strong support provided by the U.S. Senate in the continued funding of the public housing program. If it were not for the actions of this committee and other committees, we would not be in business, but we have relied on the recommendations of HUD over the past years.

Regulations and rules can provide improved conditions, but we believe one of the most important steps our organization has taken is the establishment of a lasting and permanent improvement by adopting a code of ethics. We have now established this code of ethics, and our membership has pledged their support on this particular code. In making this effort, we guarantee that all our membership will set high personal standards of conduct and pledge themselves to a code of ethics which will gurantee the best possible management of our authorities.

Public housing authorities receive little training from HUD. They are also faced with the fact that a small authority of 100 units will have to follow the same regulations and complete the same forms as an authority of 10,000 units. It is often most difficult for the small authorities, since its director has a very limited staff and, in most cases, has to perform almost every function necessary for the operation of the authority.

We hope to solve some of these problems by more interaction between the directors themselves and more sharing of knowledge among the directors. We now have a great deal of success in sharing information, and we hope to enlarge this effort substantially in the future.

In the past year, we have also made a special effort of working closely with the commissioners of public housing, and we now have provided special training and assistance so that the commissioners can better understand their responsibilities and their job opportunities.

We have recently met with our board of trustees representing housing authorities of all the 50 States. They are now completing a position paper which will be submitted to this body upon adoption at our annual meeting in June. We are concerned with a number of issues, and one of the most important issues facing us is the lack of adequate production.

We call to your attention that HUD no longer collects information on our waiting list and, therefore, does not have a current picture of the actual needs of housing and our growing demand for housing. Our production has been substantially reduced in the past years. In fact, it is zero, basically, and we are still faced with growing waiting lists. We realize that you have financial constraints, but we urge you to consider the possibility in the future years of getting back into the production of low-income housing.

We have been discussing various proposals to change the performance funding systems, but we find many unanswered questions in the various proposals. The one that HUD has been presenting to us recently has been changing to the fair market rent system. We have submitted a detailed list of questions to HUD on this particular issue, and we are now awaiting answers.

We have a large number of questions. We could not adopt such a program or reject such a program without additional information.

We do believe that such a fair market rental system to replace the PFS should not be enacted by regulation but only by legislation on the part of Congress. Because of our preference for any changes in the PFS to come through Congress, we recommend that no major change be made this year, but only modifications similar to the ones that are being considered by Congress.

We understand the desire to eventually phase out the CIAP, but we believe this can only be done when its original goals have been attained. We are very concerned as to whether or not HUD will actually be able to distribute all the funds that presently are available under the CIAP, since the limitations of staff and travel time make it appear they will not be able to achieve this goal before the end of the current fiscal year. We have found the CIAP to be one of the best programs every enacted by Congress and, when you visit our sites, you will see definite evidence of major improvements and a total turnabout of various developments through this country.

We believe that Congress should be commended for its farsightedness in enacting this legislation. We do believe that one aspect of the CIAP has been underutilized; namely, the funds for management improvements. The dollars available for this program have not been fully utilized. We are also concerned with the fact that with the management improvement part of the CIAP, there has been inadequate transfer of successful management improvements between various housing authorities. This could be best accomplished by HUD accumulating information and making it available to authorities and, in fact, actually in many cases, distributing it to various authorities throughout the United States.

There is often a duplication of effort that can be avoided by the transfer of this type of information.

We recognize the committee's effort to improve the general management of public housing through its recommendations for section 304 of the proposed act. We have met with others of the industry and we have previously submitted recommendations to this body. We believe it could be a most positive aspect of the future.

Since we prepared our testimony, one item has come to attention. It is unfortunate we have to discuss it, because it seems that there are so many other important issues, but that, namely, is the proposal to have an amendment to permit household pets in housing for the elderly. This issue has really upset our senior citizens. We have received more phone calls and more objections from the senior citizens than when the rent was raised, a proposed rent increase of 30 percent. The citizens living in these senior citizens housing do not want to have pets brought into the units. It's a situation where there is a great deal of division. We hope that in considering this that the opportunity to prove home rule would override any other issue. I have petitions. It is unbelievable the number of phone calls we have received, and I never realized that we would have such a reaction.

The other thing I want to call to your attention is, in the course of obtaining some information on a program for the homeless—I am working on in New York State—we just did a survey on 21 housing units. The waiting list is 11,237; that is people waiting. They will never live long enough to get in there. In addition to that, 17,000 tenants, or people on the waiting list, are living in doubled up conditions that actually they should not be living where they are; there are two families in one.

I would like to conclude our remarks by saying we realize you have financial difficulties, but we hope that you can continue some program of production in the future.

Thank you.

Senator GARN. As far as your remarks about the pets, I will make certain that Senator Proxmire is aware of your testimony.

Mr. LADEN. Yes. We are sending Senator Proxmire several thousand petitions. [Laughter.]

Senator GARN. In recommending additional public housing production, you have talked about the financial limitations we face, and you did say, and I quote, "Consider any means of increasing production."

But, as you know, there are some 64,000 units representing $9 billion in the present construction pipeline, and I would hope you could work with the subcommittee in helping us go ahead with the viable units and weeding out the deadwood. There is a big pipeline still sitting there.

Mr. LADEN. I agree with you, Senator, and I think a lot of responsibility has to come back to the directors themselves. We have to administer these programs and we have to get them off the ground whether it be production or modernization.

Senator GARN. Thank you very much.

Mr. LADEN. Thank you.

[The statement follows:]

STATEMENT OF JOSEPH F. LADEN, LEGISLATIVE VICE PRESIDENT, PUBLIC HOUSING AUTHORITIES DIRECTORS ASSOCIATION, AND EXECUTIVE DIRECTOR, ALBANY HOUSING AUTHORITY

Mr. Chairman and members of the committee, the Public Housing Authorities Directors Association represents nearly 600 of the best-managed housing authorities throughout the United States. We are dedicated to providing the best possible management of public housing authorities and to devote our efforts to do everything possible to constantly improve our management capabilities and to improve the services available for our tenants.

The vast majority of public housing authorities throughout the United States are well managed, but, unfortunately, because of a limited number of cases, the true image of the public housing authorities is not as always presented to the public and we must, therefore, devote a substantial amount of our efforts to improving the general image of public housing authorities throughout the United States.

We recognize the strong support provided by the U.S. Senate in the continued funding of the public housing program and if it were not for the actions of the U.S. Congress, we would not be in business. HUD has repeatedly underestimated our needs and the requests for funding from HUD have, in most cases, been substantially inadequate. We also recognize the fact that the Senate has been making a strong effort on legislative measures to take the necessary steps to encourage the improvement of the management of public housing and to direct HUD to take those measures and steps which could attain improved management and less regulation throughout the United States.

Regulations and laws and rules can provide improved conditions but we believe one of the steps our organization has taken could have, perhaps, more of a lasting and permanent effect on improved management than any other item. We have now established a code of ethics and our membership has pledged to support this particular code. We are making an effort to guarantee that all our membership will set high personal standards of conduct and pledge themselves to a code of ethics which will guarantee the best possible management of our authorities. We consider ourselves professional managers and we have had total support for our code of ethics and the goals of improved management on the part of all directors.

Public housing authority directors receive little training from HUD. They are also faced with the fact that a small authority of 100 units will have to follow the same regulations and complete the same forms as an authority of 10,000 units. It is often most difficult for the small authority since that director has a very limited staff and, in most cases, has to perform almost every function necessary for the operation of the authority.

We hope to solve some of these problems by more interaction between the directors themselves and more sharing of knowledge among the directors. We have had a great deal of success in sharing information and hope to enlarge this effort substantially in the future.

We have also made, in the past year, a special effort of working closely with the commissioners of public housing authorities and we have been providing special training and assistance so that the commissioners can better understand their responsibility and their job requirements.

We have recently met with our board of trustees representing authorities throughout the United States and we are now in the process of completing a detailed position paper on all issues affecting public housing. This paper will be finalized in the next few weeks and we will submit to the committee a copy of our position paper which may be of some assistance in your future planning.

We are concerned with a number of issues and one of the most important issues facing us is the lack of adequate production. I would call to your attention that HUD no longer collects information on our waiting list and, therefore, does not have a current picture of the actual need of housing and our growing demand for housing that we cannot meet because of inadequate stock. Our production has been substantially reduced in the past years and the need is constantly increasing. We realize the financial limitations that Congress must face but we ask you, wherever possible, to consider any means of increasing production. We believe that the best possible method of taking care of our low-income population is through the public housing low-rent housing program.

We have been studying various proposals to change the performance funding system but we find many unanswered questions in the various proposals. The one that HUD has been presenting to us recently has been changing to the fair market rent system. We have submitted a detailed list of questions to HUD on this particular issue and to date we have received no reply. We are concerned that there are many unanswered questions on how this system would work and, until we fully comprehend all the issues involved, we cannot take a position to support or reject. We do believe that such a fair market rent system to replace the PFS should not be enacted by regulation, but only by legislation on the part of Congress. Because of our preference for any changes in the PFS to come through Congress, we recommend that no major changes be made this year but only modifications similar to the ones that are being considered by Congress.

We understand the desire to eventually phase out the CIAP, but we believe this can only be done when its original goals have been attained.

We are very concerned as to whether or not HUD will actually be able to distribute all the funds that are presently available under the CIAP since, with the limitations in staff and travel time, it appears that they may not be able to attain this goal before the end of the current fiscal year. We have found the CIAP to be one of the best programs ever enacted by the Congress and when you visit our various sites, you will see definite evidence of major improvements and total turnabouts of various developments throughout this country. We believe that Congress should be commended for its foresight in enacting this legislation. We do believe that one aspect of the CIAP has been underutilized; namely, the funds for management improvements. The dollars available for this program have not been fully utilized.

We are also concerned that with the management improvement part of the CIAP that there is inadequate transfer of successful management improvements between various authorities and this could be best accomplished by HUD accumulating the information and making it available to various authorities and, in fact, actually, in many cases, distributing it to various authorities throughout the United States. There is often a duplication of effort that can be avoided by the transfer of this type of information.

We recognize the committee's effort to improve the general management of public housing through its recommendation for section 304 of the proposed act. We carefully examined this recommendation of proposal and met with other members of the housing industry and have, in conjunction with other organizations, presented specific recommendations concerning this effort to improve management. Our staff has been advised to meet with members of the committee staff jointly with both NAHRO and CIAP and we believe this joint industry effort, in combination with the efforts of your committee, could produce a most meaningful section of the law and establish an opportunity for major improvement of public housing management. We strongly support the position that only when housing standards and goals have been firmly established, can we adequately measure the quality of the management throughout this country and take the necessary steps to improve that management where needed.

STATEMENT OF DR. DAVID. L. PURYEAR, JOHNS HOPKINS UNIVERSITY, ON BEHALF OF CONSORTIUM OF SOCIAL SCIENCE ASSOCIATIONS

Senator **Garn**. Next, Dr. David L. Puryear. You can tell me how badly I mispronounced your name, although the pronunciation doesn't go in the record anyway. So I guess we're all right. Please go ahead.

Dr. **Puryear**. First of all, I would like to say I am grateful for the opportunity to testify today. I am Dr. David Puryear, and I am director of the graduate program in public policy at Johns Hopkins University.

Today I am testifying on behalf of the Consortium of Social Science Associations, which represents over 150,000 social and behavioral scientists throughout the Nation.

I have submitted a written statement and I will summarize it. The focus of my comments has to do with the research activities in the Department of Housing and Urban Development, specifically, the budget in the Office of Policy Development and Research.

I believe that research is a crucial dimension of an adequate HUD program and that current funds are inadequate. I am reminded of the time 4 years ago when I attended hearings on the Hill about the cuts in our budget. At the time, Donna Shilailah was the Assistant Secretary of the Office of Policy Development and Research, and she was told that she had done such a good job managing her resources that she would get a budget cut and an opportunity to do even better with less. It got a laugh, but at the time that was a cut from $57 million to $53 million. We are now talking about a proposed budget of $18 million.

In addition to the inflationary impact that has shrunk the value of even those few dollars, I think this is a dramatic change from several years ago and one that isn't really sustainable if we want a high-quality housing and urban development program at the Federal level.

There are really two issues, I think, that justify spending on research in this area. One is so that we can better understand new issues and changing conditions and develop new programs to meet new needs, and the other one has to do with simply managing efficiently the programs that already exist.

With respect to new research needs, I think that after 10 years of the annual housing survey, now the American housing survey, it's time for a careful look at how we might improve that. It is our only source of housing information in noncensus years, and it is worth a careful look. I think that we need to think more about targeting strategies for programs. We know, for example, that more than half of the people in poverty in any one year are only temporarily in poverty.

I think we need to look more carefully at the housing needs of the elderly as their living circumstances change. There was a joint study with the Department of Health and Human Services scheduled to start in 1980. It was canceled. At the current level budget authority it would not be feasible to reinstate that study.

I think with respect to urban development, I think the ability of cities to respond to the substantial cuts in Federal intergovernmental aid require a careful look. I think that there is a need for a closer examination of the infrastructure needs of local government.

On the management side, there is, I think, a fairly well-known story, but I think it illustrates the point very well. There was a proposal at one point to decrease the frequency of surveys of tenant incomes in public housing. It was only because of repeating our research that it was discovered that, in fact, the modest cost savings in manpower would be more than offset by the substantial increase in the Federal subsidy required where the tenants should no longer have been eligible. I think that there are many people in the Office of Management and Budget who feel that this is an inadequate amount of HUD research funding for them to do their job because they are dependent on the agency for much of their data about how the programs are functioning and how effective they are.

In the private sector, you can rely on competition to insure efficiency. In the public sector, we are left with the best efforts that we can devise to find out what is happening ourselves and manage it. I think without adequate research information, it is simply not possible to do that.

Finally, I would like to summarize by saying that I think that PDR has lived for the last 2 fiscal years on a hopelessly inadequate budget, and the costs have not been fully apparent because there is a backlog of information from previous years. But as this information becomes obsolete and there is no body of research results to replace it, it is going to be just exactly like undermaintenance on any highway.

At first you see just a few potholes; after awhile, the road becomes impassible. I don't believe any nation which neglects the generation of new knowledge about its public programs can expect them to be efficiently run in the future.

Senator GARN. Thank you.

I think that your comments about the importance and the potential payoff for carefully focused applied research are certainly well taken. Last September we devoted over a page of the Senate report to the improvement of the research which we use as a basis for making housing decisions. Just a couple of weeks ago, Secretary Pierce talked about the importance of that activity at HUD, but certainly it is necessary for us to count on people like you who are very directly involved to help identify those research areas that are most relevant and fruitful. I am sure that is even more important with the limitations on the budget that occur, that whatever funds are available, that we are able to focus them and use them in the best manner possible.

Thank you very much.

Dr. PURYEAR. You are welcome.

[The statement follows:]

STATEMENT OF DAVID L. PURYEAR, PH. D., DIRECTOR, GRADUATE PROGRAM IN PUBLIC POLICY ANALYSIS, JOHNS HOPKINS UNIVERSITY

Mr. Chairman, members of the subcommittee, first of all I would like to thank you for the opportunity to testify at these hearings. I am Dr. David L. Puryear, Director of the Graduate Program in Public Policy Analysis at the Johns Hopkins University. I am testifying today on behalf of the Consortium of Social Science Associations (COSSA) which represents over 150,000 social and behavioral scientists throughout the nation. A list of COSSA Members, Affiliates, and Contributors is attached to my testimony.

I would like to begin by thanking you for your previous support for HUD's applied research program. I believe it is an essential ingredient in the Department's ability to perform its mission effectively. Unfortunately, the importance of applied research to HUD's mission has not yet been recognized by the current Administration so I am here today to urge you to increase the budget authority for HUD's Office of Policy Development and Research (PDR).

I would like to raise two general issues with regard to the inadequacy of this proposed PDR budget. First, there is a need for more applied research so that we can better understand the housing and urban development needs of the nation and improve existing programs. Second, there is a need for more applied research in order to manage existing programs more effectively. I would like to begin with a brief description of the historical trends in the budget authorization for PDR and then turn to these two issues.

From a peak of $57.5 million in FY 1979, the budget authority for PDR has declined to $22.7 million this fiscal year and a proposed $18.0 million for FY 1984. This proposed FY 1984 level is so small relative to the need that I believe it will jeopardize the efficiency of the Department's operating programs. The $18 million proposed for FY 1984 is barely 35 percent of the budget authorized just three years ago for FY 1981. In real terms, after adjusting for inflation, it is only 30 percent of the FY 1981 level. No private sector firm with billions of dollars in annual spending and billions more in owned assets would devote such a tiny share to monitoring the efficiency and effectiveness of its efforts. Table 1 documents the trends in budget authority for the fiscal years 1978 - 1984.

The current level of funding for applied research on housing and urban development is not sufficient to permit adequate attention to a variety of important issues. For example, much greater attention to the quality and redesign of the Annual (now American) Housing Survey (AHS) is needed. This is the only nationwide source of housing data in non-census years and it has provided valuable information on the nation's housing stock. However, now that the AHS is ten years old, it is time to conduct a rigorous evaluation of its strengths and weaknesses so that it can be further improved.

Another area worthy of additional study is strategies for targeting HUD assistance programs. In a period of limited resources, targeting strategies are especially important. Yet another area in need of study is the housing needs of the elderly. We know far too little about how the elderly adjust their housing and living arrangements as they experience major life changes. In 1980, HUD, jointly with HHS (ADA), was about to mount a long-term study of housing adjustments over the latter stages of the life cycle, but HUD decided against participation.

Several analyses, including study of the Experimental Housing Allowance data sets, indicate that only about half of those households who are eligible for assistance actually participate in housing programs. We have never determined why the other half does not participate. This question has been addressed for other assistance programs, most notablly SSI and Food Stamps but has not been studied for housing assistance.

In the area of urban development, one of the key research needs is how urban areas are coping with the new federalism embodied in federal aid cuts. Are these cuts jeopardizing the progress in urban development experienced in recent years by many cities? Another major urban concern these days is decaying infrastructure. Highways, bridges, water and sewer systems, and other large-scale capital facilities require massive reconstruction in some areas, but there is little information on how widespread the problems are and how effective local governments can be in dealing with them. Indeed, a PDR study in the late 1970's was one of the first studies to focus attention on the infrastructure problem.

In addition to these research needs for the purpose of understanding housing and urban problems so we can design solutions, research is needed just to manage existing programs. Let me give an example. Tenant contributions to rent in federally subsidized public housing projects are limited to 30 percent of adjusted income. Any differential between the rent and this 30 percent limit is financed by a federal subsidy. Periodic surveys of tenant incomes are used to adjust the amount of rent tenants pay. A proposal to save federal dollars and shrink the bureaucracy by reducing the frequency of these tenant surveys was only derailed when results from PDR research were used to show that the so-called "savings" were miniscule compared to the additional rent subsidies which would result from less frequent surveys.

This example illustrates the value of research results in analyzing proposed policy and program changes. It also illustrates the importance of having a broad body of knowledge and information about the Department's programs. The results which were used in this example did not come from a specific study of the proposal to reduce the frequency of tenant surveys, but from an earlier unrelated study which happened to contain the relevant information.

PDR has lived for the last two fiscal years on a hopelessly inadequate budget. The costs have not yet been fully apparent because of the backlog of information from previous years. But, as that information becomes obsolete there is no body of research results to replace it. It is like highway maintenance. At first only a few potholes appear, but eventually neglect will make the roads impassable. No action which continues to neglect the generation of new knowledge about its public programs can expect them to remain effective vehicles for public policy. Therefore, I believe an increase in the PDR budget which reversed its recent downward trend would be money very well spent.

Table 1

PDR Budget Authority

(Millions of $)

	Nominal	Real*
1978	52.0	52.0
1979	57.5	51.6
1980	53.0	41.9
1981	51.3	36.8
1982	21.3	14.6
1983	22.7	14.7
1984	18.0	11.0

Members

- American Anthropological Association
- American Economic Association
- American Historical Association
- American Political Science Association
- American Psychological Association
- American Sociological Association
- American Statistical Association
- Association of American Geographers
- Association of American Law Schools
- Linguistic Society of America

Affiliates

- American Association for Public Opinion Research
- American Educational Research Association
- Eastern Sociological Society
- Economic History Association
- Evaluation Research Society
- History of Science Society
- Law and Society Association
- National Council on Family Relations
- North Central Sociological Association
- Northeastern Anthropological Association
- Population Association of America
- Regional Science Association
- Rural Sociological Society
- Social Science History Association
- Society for American Archaeology
- Society for Psychological Anthropology
- Society for the Scientific Study of Religion
- Society for Social Studies of Science
- Southwestern Social Science Association

Contributors

- University of California, Berkeley
- University of California, Los Angeles
- Center for Advanced Study in the Behavioral Sciences
- University of Colorado
- Columbia University
- Cornell Institute for Social and Economic Research
- Georgia Institute of Technology
- Harvard University
- Institute for Social Research, University of Michigan
- University of Illinois
- University of Iowa
- University of Michigan
- University of Missouri
- University of Nebraska
- University of Oregon
- University of Pittsburgh
- Princeton University
- Social Science Research Council
- University of Southern California
- Stanford University
- Texas A & M University
- Tulane University
- University of Washington

STATEMENT OF TERRY ALLEN PERL, EXECUTIVE DIRECTOR, ON BEHALF OF THE CONSORTIUM FOR CITIZENS WITH DEVELOPMENTAL DISABILITIES TASK FORCE ON HOUSING

Senator GARN. Terry Allen Perl, executive director on behalf of the Consortium for Citizens with Developmental Disabilities task force on housing.

Mr. PERL. Good afternoon. Thank you for giving us an opportunity to appear before you today to discuss the appropriations for HUD programs that support people with disabilities.

In the interests of time, I will briefly outline the recommendations of the CCDD task force on housing and then submit a full statement to the record. I believe you already received that.

Senator GARN. Yes; it will be included in the record.

Mr. PERL. Thank you.

As is indicated in the task force statement, my name is Terry Perl. I am the executive director of The Chimes, Inc., in Baltimore, Md. The Chimes is an organization which provides education, training, and residential services to over 400 persons, children and adults with developmental disabilities. Our residential programs include an intensive training, congregate living environment for 36 persons, several group homes, some of which are divided into apartment units and, therefore, utilize section 8 housing subsidies, and 28 apartments, each of which has one or more residents who is a recipient of section 8 support and uses that support to pay a portion of his or her costs of care.

The apartments operated by Chimes and organizations like The Chimes would not be financially feasible were it not for section 8 HUD subsidies. Other resources that are available to our clients are simply insufficient to provide the full range of support and, therefore, appropriate programing to meet their needs.

Incidentally, sir, I am accompanied by Miss Joni Fritz, who is the executive director of the National Association of Private Residential Facilities for the Mentally Retarded.

The CCDD is seeking appropriations under the section 8 housing assistance which will be responsible to the needs of low-income Americans, to the available stock of decent housing and adequate and fair market rents.

Sufficient funding should also be available, we believe, to provide for section 8 appropriations to support all loans which are made in conjunction with section 202 programs. The CCDD task force has long supported the use of section 202 loans to acquire existing housing with or without rehabilitation. We believe that there will be less cost in using this approach than either new construction or substantial rehabilitation. For the reasons outlined in our full statement, we strongly fear that HUD rules to implement this provision will make such projects financially unfeasible. We, therefore, respectfully submit that there be substantial revision in the regulations which permit the acquisition of existing housing under the 202 program at a cost savings which would permit the development of a greater number of housing units with the same amount of funding.

As is also indicated in our full statement, the number of nonprofit organizations which have applied for section 202 loans far exceeds the number of available fund reservations each year. In 1982, HUD received 1,485 applications. Only 235 of these applications were funded. The number of applications submitted to HUD for nonelderly handicapped projects has greatly increased each year, which means that the percentage of applications which can be approved is reduced.

For example, in 1979, 58 percent of nonelderly handicapped applications were approved. By contrast, in 1982 30 percent [illegible]14 out of 374 of these applications were approved.

A study conducted at the end of last year indicated that about 55,000 more individuals with mental retardation are in need of group living alternatives on a nationwide basis. This does not address the needs of other persons with disabilities. The CCDD task force on housing, therefore, respectfully recommends appropriations for the section 202 loan program at the full appropriation level for 1984.

The congregate housing services program is strongly supported by the CCDD. Other Federal and State programs which support services for people in congregate living settings are faltering at this time. Our statement discusses several of these.

Continued funding under the congregate housing services program is imperative to guarantee the viability of many section 202 projects in meeting the needs of elderly and disabled tenants. I recently visited a new 202 housing program for a group of handicapped people. While the environment was certainly appropriate and desirable, the kinds of support services given to this particular group of handicapped people was inadequate. It was inadequate because the funds were not available to provide them with the additional kind of support which they require.

Continued funding under the congregate housing services program is imperative to guarantee the viability of such programs as I have described. The task force on housing joins the ad hoc Coalition on Housing for the Elderly in recommending that $10 million be appropriated for this program in 1984. This figure is consistent with the amounts appropriated for 1979 through 1981 and is the authorization level offered by both the Senate and the House Banking Committees.

HUD currently plans also to decentralize administration of congregate housing programs and to turn the responsibility of these programs over to regional offices. The task force on housing of the CCDD opposes such a rule and respectfully requests that the responsibility for this program remain at the Federal level so that it can be effectively administered and evaluated.

Thank you, sir.

Senator GARN. Thank you very much. We appreciate your recommendations on 202 and congregate housing, and also appreciate your bringing to our attention the special problems that disabled persons encounter when participating in the housing voucher programs that go to section 8. Thank you very much.

[The statement follows:]

STATEMENT OF TERRY ALLEN PERL, EXECUTIVE DIRECTOR, THE CHIMES, INC., ON BEHALF OF THE CONSORTIUM FOR CITIZENS WITH DEVELOPMENTAL DISABILITIES TASK FORCE ON HOUSING

CCDD Witness

Mr. Terry Allen Perl will testify on behalf of the Consortium for Citizens with Developmental Disabilities (CCDD) Task Force on Housing. Mr. Perl is immediate Past President of the National Association of Private Residential Facilities for the Mentally Retarded (NAPRFMR) and is Executive Director of The Chimes, Inc. in Baltimore, Maryland. The Chimes provides a wide range of educational, adult day training services and residential services for more than 400 children and adults with developmental disabilities. The residential programs include: an intensive training, congregate living program for 36 more severely disabled persons; group homes--some of which are organized into apartments and operate with the help of clients' Section 8 rent subsidies; and 28 apartments. One or more client of each apartment program receives Section 8 assistance.

Mr. Perl will be accompanied by Joni Fritz, Executive Director of NAPRFMR and Chairperson of the CCDD Task Force on Housing; and by Jack Duncan, Esq., NAPRFMR's Legislative Advocate.

Summary of CCDD Recommendations

The CCDD Task Force on Housing respectfully submits the following recommendations to the Subcommittee on HUD-Independent Agencies of the Senate Committee on Appropriations:

- Appropriations under the Section 8 Housing Assistance Payments Program which are responsive to the housing needs of low-income Americans, to the available stock of decent housing and to adequate fair market rents; including sufficient funding in fiscal year 1984 to support all loans made in conjunction with the Section 202 Direct Loan Program;
- Encouraging HUD to successfully implement the amendment which authorizes the acquisition of existing housing as a mechanism for reducing the average per unit cost and permitting the development of a larger number of housing units with the same amount of funding under the Section 202 Program;
- Appropriations for the Section 202 Loan Program at the full authorization level for FY 1984; and
- An appropriation of $10 million for the Congregate Housing Services Program for FY 1984, with continued oversight and responsibility for the Program at the federal level.

Introduction

Members of the Task Force on Housing of the Consortium for Citizens with Developmental Disabilities favor a strong federal role in the support of housing for people with disabilities. With increased efforts to prevent the institutionalization of people with developmental disabilities--including many who require a barrier free environment--agencies which provide residential services are having a difficult time locating, adapting, supporting and financing adequate housing appropriate to meet the needs of this population.

According to a study conducted by the National Association of State Mental Retardation-Program Directors in 1982, estimates indicate that "an additional 55,000 beds should be available to meet the out-of-home group living needs of persons with mental retardation." This estimate does not address the needs of other disability groups. NASMRPD also found that the occupant population in community living arrangements has shifted to represent a more impaired group. This increases the demand not only for a barrier free environment but for the financing and provision of more services within the homes.

Programs administered by the Department of Housing and Urban Development are utilized by many provider organizations to support semi-independent living and group living arrangements for people with a variety of disabilities. Among these are the HUD Section 202 Direct Loan Program, the Congregate Housing Services Program and the Section 8 Housing Assistance Payments Program.

Section 8 Housing Assistance Payments Program

The HUD Section 8 Housing Assistance Payments Program has provided a flexible system of housing support for low-income individuals and families. It was designed to help such persons acquire decent housing that they would be unable to afford with their own resources. It has also increased the stock of available housing and provided work for the construction industry. The program has successfully utilized existing, moderately rehabilitated, substantially rehabilitated and newly constructed housing units.

The Section 8 rent certificate program has also been successfully utilized by people who are developmentally disabled. Many people with disabilities are eligible for Certificates of Participation in the Section 8 Program as low-income individuals. Section 8 Certificates often represent the difference between an individual's ability to remain self-dependent or be institutionalized. People with severe disabilities who have few resources and are unable to be gainfully employed because of that disability are eligible to receive benefits under the Social Security Disability Insurance program and/or the Supplemental Security Income program. The basic federal SSI payment is just $284.30 per month. Although supplemental payments are available in 25 states to people who live independently, most of these do not provide adequate funding for disabled individuals living along. Only four states (Alaska, California, Connecticut and Massachusetts) have supplemental payment levels for disabled individuals that exceed $100 per month. Most of the state supplements are less than $50 a month, bringing SSI benefits to around $300 a month.

The contribution of even 25 percent of an individual's disability income to share rental costs with the Section 8 payment places a burden on people whose ongoing expenses often exceed those of a nondisabled person.

Housing standards under Section 8 are important to assure that low-income people are able to live in a decent environment. These standards also stimulate the housing industry.

It seems appropriate to repeat for the Subcommittee questions the CCDD Task Force on Housing presented to the President's Commission on Housing in December of 1981 when asked to comment on the Administration's housing voucher proposal. The Task Force asked:

- Can chronically disabled persons, particularly those with mental disabilities, realistically be expected to manage a voucher in the selection of adequate housing?
- Are proposed regulatory protections sufficient to protect against discrimination, misleading and inaccurate advertising, and fraud?
- Competition assumes the possibility of failure; can we as a society allow chronically disabled persons to fail in their use of vouchers to obtain housing?
- Can voucher values really be established to financially purchase housing?

- How will special needs, such as physical accessibility accommodations, be dealt with in establishing voucher values?

The testimony presented to the President's Commission by Dr. E. Clarke Ross, Director of the UCPA Governmental Activities Office, clearly demonstrated that the effect of the Housing Payment Certificate program proposed by the Administration would change the very nature of HUD rent subsidies by eliminating the housing subsidy concept and substituting an income subsidy program--and an inadequate one when the reduced value of the payment is considered.

Under the existing Section 8 program, subsidies and tenant contributions are based on fair market rents. Standards are also applied to housing supported through Section 8 rental Certificates. The Administration proposes to establish a reduced flat rate payment under the voucher and permit recipients to shop for any housing they can find. Assistance would not be tied to the actual rent, allowing recipients to rent substandard housing and use any part of the payment which exceeds their monthly rent for any purpose they choose. Such a system eliminates the very purpose of a housing subsidy program, which is to help low-income persons acquire decent housing while stimulating the housing industry and developing a more adequate housing stock.

A housing voucher program would work only if the value of the voucher is adequate to pay the fair market rent for decent housing without forcing a low-income individual or family to contribute an unfair portion of their income toward the housing. As this Task Force suggested to the President's Commission on Housing, if those features are removed, HUD need not be involved at all. Cash subsidies could instead be added to SSI and AFDC payments--targeted to housing--thus avoiding duplicative bureaucratic structures.

The CCDD Task Force on Housing is opposed to the Administration proposal to convert the Section 8 program to a voucher system through the "Housing Payment Certificate" program, which would fail to address Congressional goals for housing assistance payments.

The Task Force is respectfully seeking appropriation levels under the Section 8 Housing Assistance Payments Program which will be responsive to the housing needs of low-income Americans, to the available stock of decent housing, and to adequate fair market rents.

Section 8 rental assistance is also an essential ingredient in assuring the success of projects supported by the HUD Section 202 Direct Loan Program. The CCDD Task Force on Housing joins the Ad Hoc Coalition on Housing for the Elderly and the Senate and House Committees on Banking in recommending that sufficient Section 8 funding be appropriated in FY 1984 to support all loans made in conjunction with the Section 202 Direct Loan Program.

Section 202 Direct Loan Program

Each year the number of nonprofit organizations which apply for Section 202 Direct Loans far exceeds the number which receive fund reservations. According to the HUD Direct Loan Office, in 1982 they received 1485 Section 202 applications but only 235 agencies were awarded fund reservations totalling some $722 million. This will finance 15,633 units of housing in 47 states and Puerto Rico.

Of the 1485 applications received in 1982, 374 (25%) were from agencies proposing to develop small community-based housing for nonelderly handicapped persons. About 13% (2,076) of the 15,633 units which received fund reservations in FY 1982 will house nonelderly handicapped individuals.

The number of requests for Section 202 Loans to support living arrangements which will house people with disabilities has grown each year in proportion to the total number of applications received by HUD. This results in approval of a smaller percentage of such applications each year. In 1979 HUD approved almost 58% of the applications from sponsors which planned to develop housing for nonelderly handicapped persons. In 1980, a little over 51% of such applications were approved, but by 1981, only 38% of the applicants for nonelderly handicapped housing received fund reservations. This year just 114 of 374 applications were approved, representing only 30% of those which applied. Thus, a 28% decrease has been experienced since 1979 in the percentage of Section 202 applicants that actually receive fund reservations to develop housing for people who are disabled. In addition, many which would like to access such funding never apply because of the strong competition for available monies.

According to the HUD FY 1982 Budget document, $818.823 million was awarded under the Section 202 program in 1982 to develop 16,038 units of housing. This averages $51,000 per unit.

The Administration's 1983 Budget requests $476 million for 10,000 units of housing under the Section 202 program, or an average expenditure of $47,600 per unit. At the HUD January 31 budget briefing, Assistant Secretary for Housing Phil Abrams stated that the Administration actually hopes to produce 11,000 units rather than 10,000 in FY 84 for the same amount of money.

The Congressional Budget Office is estimating that the per unit cost of a Section 202 supported project will run about $47,700 for FY 1984, a little more than the Administration's estimate. CBO tells us that although this figure is lower than the cost from previous years, the Administration is taking a hard line on cost-containment procedures. If they are successful in these efforts, CBO feels that the figure of $47,700 per unit will not be unreasonable.

The CCDD Task Force on Housing feels that a more successful effort at keeping per unit costs down may be achieved through implementation of the amendment which permits the acquisition of housing with or without rehabilitation. This provision has the potential for supporting less costly housing than can be developed through new construction or substantial rehabilitation. We believe, however, that the rental levels developed by HUD to apply to acquired housing--set at 75% of the fair market rent--will make such projects infeasible. Experience supports this belief. Fair market rents in the 202 program are already unreasonably low. As a Section 202 housing consultant recently commented to this Task Force, "HUD fair market rents are neither fair nor the market rent."

HUD fair market rents (FMRs) are supposed to be published annually, based on HUD surveys of the cost of similar housing of "modest and moderate design" in the surrounding area. HUD has never evaluated the cost of group homes, however, and until May of 1982, applied the FMR for a semi-detached/row home to group homes developed under the Section 202 program. Last May, HUD rather arbitrarily decided to substitute the lower FMR for walkup dwellings to group homes. Some Section 202 sponsors are having difficulty making newly constructed group home projects financially feasible under the reduced FMR for walkups. Application of 75% of the FMR for walkups rather than semi-detached/row housing will thus compound the inequity for sponsors who wish to acquire existing housing.

The current HUD rules for acquiring existing housing under the 202 program necessitate the purchase of homes which are in virtually "move-in" condition. The price of such housing is invariably close to that of new construction. In addition, providers are finding that the nation's current emphasis on energy conservation has resulted in lower utility costs in newly constructed housing than in existing homes. It, therefore, seems evident to us that the application of FMRs which are just 75% of the FMR for new construction will render efforts to acquire existing housing financially infeasible.

The maximum expenditure permitted under HUD rules for moderate rehabilitation in the Section 202 program will also work against the feasibility of such projects. Existing housing in "move-in" condition often requires some rather substantial expenditure to meet life safety and accessibility requirements to be licensed for group home use. Furnaces and stairs may have to be enclosed, bathrooms altered and interconnected smoke detectors and an exterior stairway added. These kinds of modifications can easily exceed the maximum expenditures of $3,000 or 15% of the loan amount permitted under current HUD rules. This too will prove a disincentive to the acquisition of existing housing.

The greatest potential for cost savings in acquiring existing housing will be because the approval process can be significantly shortened, avoiding the involvement of extra staff and consultant time and the consequences of inflation which now occur during the two to three years it takes to construct a home under the 202 program. For this reason the CCDD Task Force on Housing has long supported use of the Section 202 program to acquire existing housing. Unfortunately, HUD rules to implement this extended use of Section 202 funding will very likely result in its failure.

The CCDD recommends substantial revision of Section 202 rules which permit the acquisition of existing housing with or without rehabilitation (including increasing fair market rents to a level which will guarantee the feasibility of such projects) to reduce the average cost of developing a unit of housing under the Section 202 program. We are therefore asking this Subcommittee to suggest to HUD that every effort be made to successfully implement the amendment which authorizes the acquisition of existing housing as a mechanism for reducing the average per unit cost and permitting the development of a larger number of housing units for the same amount of funds.

Our Task Force had joined the Ad Hoc Coalition on Housing for the Elderly in supporting the development of 16,000 units of housing under the Section 202 program for FY 1984. That is close to the number of units funded during each of the past two uears and (using CBO cost estimates) would have resulted in an expenditure of about $763.2 million. Unfortunately, authorizing legislation in both the Senate and the House will permit the funding of only about 14,000 units of housing under the 202 program. This is more than 1,600 fewer units than received fund reservations in FY 1983, and more than 2,000 fewer than were approved in FY 1982.

The Task Force on Housing assumes that HUD will continue to allocate more than 10 percent of the units developed each year for housing nonelderly handicapped persons. We are pleased that HUD has demonstrated their awareness of the level of housing need for people who are handicapped by setting aside a generous portion of the fund reservation to serve this population.

The CCDD Task Force on Housing respectfully recommends that the Section 202 Direct Loan Program be funded at the full authorization level for FY 1984.

Congregate Housing Services Program

Members of the CCDD Task Force on Housing are strongly supportive of the HUD Congregate Housing Services Program. Community-based housing for people with disabilities is usually not economically feasible without added funding for support services. This includes such things as meals, staff aid, transportation and other services which enable people to become more self-sufficient and remain out of more costly institutional settings. As pointed out earlier in this testimony, the movement of more severely disabled persons to the community is resulting in the need for more in-house services. Other programs which support service costs are faltering:

- The Title XX Social Service's program was used in many states to provide services to people in group living arrangements. Since funding has been decreased and the program converted to a block grant, less money is available in the states to support services for individuals living in group settings under Title XX.
- HUD and the Department of Health and Human Services Health Care Financing Administration have not yet resolved difficulties in co-funding Section 202 projects through the Title XIX program for intermediate care facilities for the mentally retarded, though we have been promised for more than a year that resolution of this problem is imminent.
- The Title XIX Waiver Program for Home and Community Based Services had been approved on a very limited basis in just 29 states at the end of March, and most of the approved Waivers have not yet been implemented. Only 19 states specifically mention people with mental retardation and/or developmental disabilities in their Waiver plans.
- State governments are confronting the same fiscal problems currently facing the federal government, and thus fewer state dollars are available than in the past to support services for people living in housing developed under the HUD 202 program.

Early in 1982, the United Cerebral Palsy Associations conducted a study of the Congregate Housing Services program. Nineteen agencies representing 15 states were interviewed. UCPA found that funding for support services "is piecemeal, is in a transition toward more state control, and in most instances is being reduced." Although UCPA believes that Title XX Social Services "is the most appropriate generic source of funding for these congregate living arrangements," Title XX funds were generally not available to the agencies interviewed. UCPA found that some 202 sponsors were actually delaying construction of their projects until a guarantee could be made that funding would be available for support services. Others in the construction phase feared that they would be unable to provide needed services once their housing was ready to open. It was also clear that efforts to deinstitutionalize more severely disabled persons--those who require a higher level of services to live in the community--would be impossible without adequate funding for support services.

As a result of their study, UCPA found the Congregate Housing Services Program as "necessary and desirable as one option among others" for funding services in Section 202 and public housing projects. They also felt that in this time of program instability it was particularly important for the Congregate Housing Services Program to continue.

The CCDD Task Force on Housing concurs with the UCPA findings and suggests that continued funding under the Congregate Housing Services Program is imperative to guarantee the viability of many Section 202 projects.

As the result of last year's Congressional Conference Committee agreement on H.R. 6956 (The HUD/Independent Agencies appropriations bill of 1982), $500,000 has been appropriated to undertake a new three year demonstration of the Congregate Housing Services Program in rural areas. The CCDD Task Force supports this expansion of the program and looks forward to its implementation.

The Ad Hoc Coalition for Housing for the Elderly is recommending that $10 million be appropriated under the Congregate Housing

Services Program in FY 1984. That figure is consistent with the amounts appropriated from 1979 through 1981, and is the authorization level used in H.R. 1 for FY 1984.

The CCDD Task Force on Housing joins others in recommending that $10 million be appropriated for the Congregate Housing Services Program in fiscal 1984.

We understand that HUD currently plans to decentralize administration of the Congregate Housing Services Program and turn responsibility over to the Regional Offices, effective September 30 of this year. The UCPA study revealed that there is still some confusion about the program. Rules for its administration and control should be developed with oversight continuing at the national level. It is time for a thorough evaluation of the Congregate Housing Services Program and this can best be undertaken at the national level. The CCDD therefore respectfully recommends that Congress mandate continued oversight and responsibility for the Congregate Housing Services Program at the federal level.

Senator HUDDLESTON [presiding]. The next witness will be Ella Mae Horse, recording secretary of the National American Congress of American Indians. Is she present?

Is Cushing Dolbeare here?

Willard Gourley?

STATEMENT OF WILLARD GOURLEY, PRESIDENT, NORTHWESTERN MORTGAGE CORP., ON BEHALF OF MORTAGE BANKERS ASSOCIATION OF AMERICA

Mr. GOURLEY. Yes, sir. I volunteer.

I am delighted to help you stay ahead of schedule.

Senator HUDDLESTON. I appreciate that.

Mr. GOURLEY. Mr. Chairman, I am Willard Gourley, and I am chairman of the legislative committee of the Mortgage Bankers Association. As an aside, I am president of Northwestern Mortgage Corp. in Charlotte, N.C. Sharon Canavan, legislative counsel, is here with me.

As you are aware, mortgage bankers are a principal source of residential mortgage credit, providing between 20 and 25 percent of single-family mortgages in this country in recent years.

The Nation's economy is finally emerging from the longest recession since the Great Depression. Increased spending on new home construction, combined with the demand for mortgage financing that is the result of major declines in mortgage interest rates, will be a strong engine of growth for the economy in 1983. MBA forecasts that housing starts in 1983 will be at least 1.5 million units, well above the 1.06 million units started in 1982.

The housing recovery must not be allowed to stumble, and we, therefore, are supporting adequate credit budget limits for the FHA mortgage insurance programs and the GNMA mortgage-backed security programs of $45.9 billion and $6.25 billion, respectively. These levels are identical to those adopted in fiscal year 1983 by Congress. We believe that these levels can be supported for a number of reasons.

The housing recovery currently underway must expand and the FHA and GNMA-MBS credit budget limits should not limit demand for mortgage credit assurance via these programs. Not only does the recovery depend upon an adequate supply of mortgage credit, but potential homebuyers, particularly first-time buyers who have been unable to afford homes due to higher mortage interest rates over the past 3 years, depend upon the affordable access to mortgage credit provided by FHA and GNMA mortgage-backed securities programs.

Second, there continue to be a great deal of refinancing activity by borrowers who secured loans at higher interest rates and who now wish to refinance to take advantage of lower rates. Parenthetically, I might say today 11 to 12 percent are lower rates is a little interesting, but that is what they are compared to where we have been. FHA has estimated that as much as 30 percent of its recent activity is due to refinancing. While this level may diminish somewhat over the next year, there is a large volume of seller financing with near-term balloon payments. These borrowers will need to refinance when those notes come due.

Third, the Senate version of the 1983 housing authorization bill provides for a number of new FHA programs, including adjustable rate mortgages as well as graduate payment and shared appreciation mortgages for both single-family and multifamily programs. If enacted into law, these will likely create more demand for the FHA programs by making affordable mortgage credit available for more households.

Fourth, the FHA direct endorsement program will soon be implemented. This will undoubtedly spur demand where borrowers, lenders, and builders who formerly would not rely on FHA because of lengthy loan processing delays, will turn more frequently to its program.

Finally, many investors who formerly provided a strong market for purchasing individual FHA-VA loans now either do not buy FHA-VA mortgages at all or prefer the format of a mortgage-backed security because of its greater liquidity. This situation has created more demand for the GNMA mortgage-backed securities program as the almost exclusive market for the FHA and VA mortgage product.

In closing, I would like to address one other appropriations item, and that is the funding for a multifamily assisted rental housing production program.

MBA supports the funding level of $1.3 billion provided in the House version of the first concurrent resolution on the budget. Many areas of this country are suffering an acute shortage of rental housing, particularly for lower income families, and such a program will help to address that need. The recent high, volatile interest rates have made it difficult for conventional lenders to meet the need for affordable financing for multifamily rental projects, particularly those which serve the disadvantaged, low-income persons, the elderly, and the handicapped.

We thank you for the opportunity to appear before the subcommittee and we would be pleased to answer any questions or to provide any additional information as needed.

Senator HUDDLESTON. Thank you very much, Mr. Gourley. It seems the mortgage bankers are in a little better shape.

Mr. GOURLEY. We are smiling. I would like to make one observation today. We are out of business with FHA, an interesting thought; we tried to get FHA authorization approved, and, hopefully, that will happen by tomorrow, and that is not for this committee, but it is an observation that goes with our credit budget limits. It does frequently present us with a problem when we run out of business.

Senator HUDDLESTON. I understand. I also want to note that we will be increasing FHA by $5 billion on Thursday of this week in the supplemental.

Mr. GOURLEY. Right. That will get us through this year. Thank you very much.

Senator HUDDLESTON. Thank you very much for your testimony.

Mr. GOURLEY. Thank you, sir.

[The statement follows:]

STATEMENT OF WILLARD GOURLEY, PRESIDENT, NORTHWESTERN MORTGAGE CORP., ON BEHALF OF THE MORTGAGE BANKERS ASSOCIATION OF AMERICA

Mr. Chairman and Members of the Subcommittee, my name is Willard Gourley. I am President of Northwestern Mortgage Corporation located in Charlotte, North Carolina. I serve as Chairman of the Legislative Committee of the Mortgage Bankers Association of America.* MBA is the trade association of the Nation's mortgage banking and real estate finance industry. Accompanying me today are Burton C. Wood, MBA's Legislative Counsel, and Sharon M. Canavan, MBA's Associate Legislative Counsel.

We appreciate the opportunity to appear before you today to testify on the appropriations for FY 1984 for the Department of Housing and Urban Development (HUD). Our comments will focus on the necessity for establishing sufficiently high credit budget limitations for the non-subsidized, user-fee supported Federal Housing Administration (FHA) mortgage insurance and Government National Mortgage Association (GNMA) Mortgage-Backed Security (MBS) guaranty programs. We will also comment briefly on other funding proposals contained in the 1983 Housing authorization bills presently before the House and Senate.

ECONOMIC OUTLOOK

The Nation's economy, led by a resurgent housing sector, is finally emerging from the longest recession since the Great Depression. Increased spending on new home construction, combined with the demand for mortgage financing that is the result of major declines in mortgage interest rates over the past few months, will be a strong engine of growth for the economy in 1983. MBA forecasts that housing starts in 1983 will total at least 1.5 million units, up considerably from the 1.06 million units started in 1982. Inventories of new homes for sale are near their lowest levels in ten years, meaning that even a gradual upturn in home sales will result in renewed construction. Sales of existing homes are also picking up as sellers offer units that had been held off the market. Loan applications, especially for Federal Housing Administration (FHA) and Veterans Administration (VA) programs, are at all-time highs.

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*The Mortgage Bankers Association of America is a nationwide organization devoted exclusively to the field of mortgage and real estate finance. MBA's membership comprises mortgage originators, mortgage investors, and a variety of industry-related firms. Mortgage banking firms, which make up the largest portion of the total membership, engage directly in originating, financing, selling, and servicing real estate investment portfolios. Members include:

- o Mortgage Banking Companies
- o Mortgage Insurance Companies
- o Life Insurance Companies
- o Commercial Banks
- o Mutual Savings Banks
- o Savings and Loan Associations
- o Mortgage Brokers
- o Title Companies
- o State Housing Agencies
- o Investment Bankers
- o Real Estate Investment Trusts

MBA headquarters is located at 1125 15th Street, N.W., Washington, D.C. 20005; telephone: (202) 861-6500

Indicators other than housing are also showing signs of recovery. Business inventories, cut sharply in the fourth quarter of 1982 at an annual rate of nearly $44 billion, will decline only slightly in this first quarter. While some businesses will remain cautious until consumer confidence improves, this bottoming out of the inventory cycle is a major sign that the economy is on the mend. Auto sales are rebounding in response to declining financing rates. Larger than normal tax refunds, a result of the Treasury Department's delay in implementing last year's tax cut fully in withholding from upper-bracket taxpayers, will also play a role in boosting consumer spending. Consumer debt-to-income ratios are at their lowest point since 1974-75, meaning that people who are working have the ability to take on the debt necessary to finance more expensive items, such as homes and cars. As consumer outlays rise, production will resume.

Because of the Federal Reserve's resolve in cooling inflationary pressures, the economy will experience only moderate inflation, at a 4 to 6 annual percentage rate, during 1983. As the market fully appreciates the recent improvement in inflation, interest rates will continue their recent declines. Short term treasury bill yields should be down to 7 percent by the end of the summer and mortgage yields should decline from their current level of 12-13 percent to the 11-12 percent range by year end. This gradual reduction in interest rates will permit the emerging economic recovery to continue at a modest 3-5 percent annual growth rate. The good news here is that this below-average recovery pace will help to avoid a runup of interest rates, so that the recovery can continue. Improvement in the Federal deficit, in unemployment, and in industrial capacity utilization will be slow but steady throughout 1983 and 1984.

LOW-INCOME HOUSING

MBA is concerned that neither S 644, the "Housing and Community Development Act of 1983" nor the budget resolution, S Con Res 27, provide for a multifamily rental housing production program. The House-passed version of the First Concurrent Resolution on the Budget for FY 1984, H Con Res 91, proposes $1.3 billion in funding authorization for a multifamily housing construction assistance program. MBA supports a multifamily housing production program, because many areas of this country are suffering an acute shortage of rental housing, particularly for lower-income families.

The Senate version of the 1983 housing bill, S 644, proposes to phase-out the Section 8 program completely and replace it with a less expensive housing certificate program. MBA is opposed to any plan that contains no provision whatsoever for a multifamily housing production program. While a rental certificate program may be a worthwhile measure, particularly because of its cost saving potential, in areas that have sufficient supply of housing, it does not provide the necessary incentive to build additional multifamily rental units in those communities that suffer shortages.

Prevailing financial market conditions make it difficult for conventional lenders to meet the need for affordable financing for multifamily projects serving the disadvantaged, namely low-income persons, the elderly, and the handicapped. MBA does not believe that exclusive reliance upon tax-exempt bonds for financing, as provided for in section 11(b) of the 1937 Housing Act will be sufficient to address that need. The need for low-income rental housing is so great and the uncertainties of the market—even the tax-exempt bond market—are so considerable that there will be a need to continue a multifamily rental assistance production program.

SECTION 235

MBA supports an extension of the Section 235 single-family homeownership program for lower-income families and limited funding of $167 million for the program. Even at present interest rate levels, many families of moderate means cannot afford a home. The Section 235 program offers an opportunity to these families to purchase a home, while the program is structured to minimize the Federal subsidy by recapturing the assistance upon the sale of the home and by phasing out the subsidy as the homeowner's income rises to a point where the subsidy is not necessary.

MBA supports long-term budget authority of $167 million with annual contract authority of $16.7 million. This will provide subsidies for a ten year period. Experience under the program has been that borrowers' incomes have risen sufficiently to meet the mortgage payment without the interest subsidy after seven years. For those borrowers whose incomes have not risen, the subsidy payments could be made out of a fund established from the recaptured funds after the ten year contract authority period has lapsed.

FHA AND GNMA-MBS COMMITMENT LIMITATIONS

MBA strongly opposes the institution of limitations on the non-subsidized, user-fee supported FHA mortgage insurance and GNMA-MBS programs. If credit budget limits are to be imposed, they should be set sufficiently high under the non-subsidized FHA and GNMA-MBS programs to accommodate demand. Although Congress, in the past few years, has imposed limits on these programs, it has been sensitive to the need to maintain a viable FHA and GNMA, so it has set these levels high enough to accommodate demand.

MBA suggests that the FHA and GNMA-MBS ceilings be set at the same levels as were approved for FY 1983—$45.9 billion for FHA and $68.25 billion for the GNMA-MBS program. Even though the Administration sought a $6.1 billion increase in the FHA mortgage insurance commitment ceiling from the limit of $39.8 billion approved in the HUD appropriations law for FY 1983 (P.L. 97-272) up to $45.9 billion in the Continuing Resolution (P.L. 97-377), it is likely that even these increased limits may be reached as early as June at the present commitment rates. The GNMA-MBS program is experiencing a similar situation with commitments running in the $6 billion range each month. A number of factors support setting the ceilings at these levels.

Most importantly, activity can be expected to increase because of the housing recovery, if interest rates remain at or near their current levels. Demand for housing has been pent-up severely for the last three years. That fact, in addition to demographic demand attributable to new household formations, is likely to keep mortgage activity at high levels. If activity levels for estimating the credit budget limits are predicated on the performance of the mortgage finance markets in the past three years, the limits will seriously underestimate demand for the programs.

New housing starts have been far below those projected as necessary to accommodate housing demand by the "baby boom" generation that is currently reaching prime homebuying age. These potential purchasers have been frustrated in their efforts to afford a home in the past few years while interest rates have been so high. Now that interest rates have abated, it is important to have available an adequate supply of home mortgage credit if the housing needs of these families are to be addressed. In our estimation, at least 1.8 million housing starts per year will be necessary to fill that need. In the past three years, housing starts have fallen far below that threshold. While it may be difficult to build and finance enough homes to make up for the past few years, it is important to ensure that mortgage credit is not artificially restricted and mortgage costs increased so as to impede the effort to gear up and at least approach the projected necessary annual levels of new housing production.

The Administration has devised a formula to arrive at its proposed figure of $58.65 billion for the GNMA-MBS level. The formula uses a projected FHA activity level of $39.8 billion. MBA is alarmed, because it believes these levels could seriously underestimate consumer demand for these programs. MBA is particularly concerned about the decrease in the GNMA-MBS program limit, because the GNMA formula understates two key factors—the percentage of FHA/VA loans that are placed in GNMA pools and the fallout ratio for gross versus net GNMA-MBS commitments. Furthermore, there are a number of reasons that there will be more activity under both the FHA and GNMA programs in the near-term future, thus requiring higher levels.

The levels of applications for FHA mortgage insurance, and with a time lag, GNMA-MBS guaranty commitments, have mushroomed since rates decreased to more affordable levels in September of 1982. Both FHA and GNMA have been experiencing unprecedented activity levels as the housing recovery has gotten underway. This activity will surely keep up its pace, particularly with the recent drop in the FHA interest rate to 11.5 percent, because housing affordability is especially sensitive to decreased interest rates.

Second, applications to refinance high interest rate loans have recently accounted for approximately 30 percent of FHA applications. While this demand will slack off somewhat, MBA believes that there will still be a strong demand for refinancing funds over the next few years. Seller-financing accounted for a large volume of the loans originated over the past few years. Very often, however, that financing was not long-term, but called for a balloon payment of the mortgage balance after a specified number of years, usually three, five or seven years. These balloons will continue to mature over the next few years and will require an adequate source of refinancing funds.

Third, the possible enactment of new insurance programs proposed in S 644, the Housing and Community Development Act of 1983, for both single-family and multifamily housing will likely spur additional interest in FHA's programs. In order to evaluate properly the potential for these experimental programs, the ceilings must be set high enough to accommodate demand under these new programs, as well as FHA's traditional fixed-rate, long term programs.

Fourth, the FHA Direct Endorsement program, under which lenders will assume responsibility for underwriting and appraising loan applications, will soon be implemented. This program will reduce FHA processing delays and thus increase reliance on the FHA programs.

Finally, and perhaps the most important, is the dramatic shift that is occurring in the marketplace. Lenders who traditionally have purchased "whole" FHA/VA loans and retained them as investments in their portfolios are no longer doing so. If they are purchasing mortgages at all (and many have veered away from long-term assets), these purchases are in the form of mortgage-backed securities, most typically GNMA-MBS issues. Where several years ago these institutional lenders purchased as much as one quarter of the FHA/VA loans originated, they now purchase only a negligible portion of those, at least as whole loans. Furthermore, while FNMA has the authority to purchase conventional loans as well as FHA/VA mortgages, in the past year FNMA has sought yields above those available through the sale of GNMA-MBSs. As a result, FNMA's purchases of FHA/VA loans have fallen dramatically, as indicated by the table below.

FNMA PURCHASES OF FHA/VA LOANS

	Volume (in millions of dollars)
1982	$ 901.2
1981	2,284.0
1980	5,273.3

Formerly, FNMA provided a strong market alternative for FHA/VA loans. However, since that market has virtually dried up, the GNMA-MBS program should be given high enough ceilings to provide a sufficient supply of long-term, fixed-rate, mortgage credit. While this does not indicate that FNMA will never again purchase an FHA or VA loan, it does underscore the importance of providing an adequate credit budget level for GNMA, as well as explain the upsurge in the GNMA commitments to guaranty in FY 1983.

Procedural Safeguards.

In addition, MBA suggests that flexibility and procedural safeguards are an essential ingredient of the credit budget enforcement mechanism. The Senate HUD-Independent Agencies Appropriations Subcommittee's report on the FY 1983 HUD-Independent Agencies Appropriations law (P.L. 97-272) contained precautionary language, in the event that the limits on the FHA and GNMA-MBS programs were approached, which stated that "the Department (HUD) is directed to notify the Committee if it appears the limitation will require a moratorium on commitments." (See S. Rpt. 97-549, p. 17). MBA supports the inclusion of stronger language in light of the Administration's past efforts to reduce these programs without Congressional consultation. Congress must be notified by HUD at the earliest possible time that the ceilings could be reached in order to take appropriate and timely action.

MBA suggests that the following legislative language would provide the appropriate notice without burdening the administrative agencies:

> "The Secretary shall notify Congress whenever the cumulative fiscal year commitments issued under the Federal Housing Administration mortgage insurance programs or the Government National Mortgage Association Mortgage-Backed Security program exceed a pro-rata share of the total year-to-date commitment authority during any quarter of the fiscal year. However, no

> limitation is imposed, by virtue of this section, on the cumulative quarterly commitments authorized to be issued by the Federal Housing Administration or the Government National Mortgage Association, except pursuant to the total commitment limitations imposed by the Appropriations Act.
>
> This notification shall be made within 30 days after the end of any quarter affected by this provision."

This language would impose a duty on the HUD Secretary and the GNMA President to report to the Congress in a timely fashion whenever it appears that the commitments issued under the FHA mortgage insurance or the GNMA-MBS guaranty programs are being drawn down at such a rate as to pose the possible danger of reaching the program commitment ceilings. Prompt notification will enable Congress to react and to avoid the possibility of program moratoria, and to react within the procedural constraints imposed by the budget and appropriations process, whenever it appears that commitments are being utilized at such a rate as to pose the possibility of running out of commitment authority before the end of the fiscal year. This section avoids imposing a blanket reporting requirement—rather, a report is required only when it appears that program usage in any quarter, on a cumulative basis, is proceeding at such a pace that commitment authority could be exhausted. Both HUD and GNMA currently have tracking systems that provide this information within at least 30 days. However, this proposed language also makes it clear that this is not an allocation scheme to ration commitments on a quarterly basis.

Furthermore, MBA urges that anti-impoundment language be included as part of an appropriations measure. The Continuing Resolution for FY 1983 (P.L. 97-276) provided in Section 145 that:

> "Notwithstanding any other provision of this joint resolution, the head of any department or agency of the Federal Government in carrying out any loan guarantee or insurance program shall enter into commitments to guarantee or insure loans pursuant to such program in the full amount provided by law subject only to (1) the availability of qualified applicants for such guarantee or insurance, and (2) limitations contained in appropriations acts."

This expresses a clear and incontrovertible intention on the part of Congress to set limits itself on guaranty and insurance programs—limits which cannot be reduced by administrative directive. MBA urges that language similar to that provided in Section 145 of P.L. 97-276 be included in the FY 1984 HUD-Independent Agencies Appropriations bill, or in a Continuing Resolution, if such a measure becomes necessary.

Summary.

MBA believes that reductions in the Federal deficit are necessary in order to decrease interest rates. The FHA mortgage insurance and GNMA-MBS programs, however, rely solely on private investment funds. There are no Federal dollars expended under these programs. Nor are there any ties to the Federal Financing Bank. The private lender, not the Federal government, is responsible for marketing the GNMA securities to investors through securities dealers. To have any favorable impact whatsoever on financial markets, reductions in Federal spending must be real ones, not simply artificial reductions on paper.

Proposed reductions in the FHA mortgage insurance and GNMA-MBS guaranty commitment levels will not have an ameliorative effect on interest rates and on the financial markets. Even if marginally qualified home mortgage borrowers are rationed out of the markets, because they are unable to obtain mortgage financing at all, Federal deficit spending will soak up that reduced share. Thus, the real issues involved in these proposed reductions are whether the Federal government intends to reduce its commitment to housing and mortgage finance, by restricting programs that enhance the availability of adequate supplies of mortgage credit, especially for moderate- and middle-income families and first-time homebuyers, and whether these reductions signal an intent to reduce, overall, the share of credit that has historically been utilized in financing mortgages.

These issues are being addressed at a time when the demand for home mortgage credit has never been stronger. The Federal government, long ago, recognized the social need for, and importance of, housing its citizens, and responded in an appropriate manner by creating programs to fulfill this social goal. Not only have the non-subsidized FHA insurance and GNMA-MBS guaranty programs worked efficiently, but they have been profitable for the government. They have achieved a remarkable success in structuring a mortgage finance delivery system that provides readily available sources of mortgage credit throughout all phases of interest rate cycles, involving private sector lenders and investors to a maximum degree.

The real benefit enjoyed under these programs is not a subsidy, but the capital market efficiency of the GNMA security, and the standardization offered by the underlying FHA and VA loan instruments. The non-subsidized FHA mortgage insurance programs provide an unfailing source of private mortgage credit for low-downpayment, fixed-rate loans to homebuyers. The GNMA-MBS program ensures lenders of ready placement in the secondary market for FHA and VA loans. In effect, the existence of the GNMA-MBS program allows the individual consumer the same access to the credit markets as large corporate borrowers and the government.

The future of the mortgage finance delivery system is heavily clouded by uncertainty. The thrift industry is undergoing unprecedented difficulties, which undermine its capacity to provide long-term financing for mortgages. Fundamental changes in the powers of all financial institutions are being implemented pursuant to the Garn-St Germain Depository Institutions Act of 1982, (P.L. 97-320). Those changes will undoubtedly alter the roles of many institutions that previously have been deeply involved in mortgage finance. As the role of these traditional mortgage finance institutions as a predominant source of mortgage credit is altered, the pivotal importance of the secondary mortgage market will increase, because of its ability to attract adequate supplies of mortgage credit from non-traditional, as well as traditional, investors. A lender, rather than having to procure an investor for every individual loan, now packages a number of loans in a mortgage pool. Investors need not consider the merits of the individual loans themselves, or even know anything about mortgages, but can rely instead on the proven track record of the GNMA security.

Congress should be careful not to overestimate the capacity of the suppliers of conventional funds to provide sufficient volumes of long-term, fixed-rate mortgage funds as have been provided in past economic post-recession periods. The current shakedown period in which the markets are evolving should be handled carefully so as not to create shortages of mortgage credit at a time of unprecedented demand.

Not only is the role of primary lending undergoing radical changes, but the very nature of the mortgage, itself, is being altered. With the inflationary atmosphere and volatile interest rates of the recent past, investors are less willing to lock their funds into long-term, fixed-rate instruments. The proliferation of creative mortgage financing techniques in the conventional market inhibits standardization of the underlying mortgage instruments—a feature that is essential whenever loans are to be pooled and sold in packages as securities in the secondary mortgage market.

The GNMA-MBS is one of the most significant and successful mechanisms ever devised for attracting capital for mortgage investments. MBA believes that the continued strength of the GNMA-MBS program will assist rather than impede the development of a viable conventional MBS market, because trading in the GNMA-MBS serves to establish a benchmark for the pricing of these instruments, as well as serving as a model for the development of a conventional MBS in a market that is currently undergoing radical changes. These fundamental changes inhibit the standardization that is so necessary to investor acceptance of these types of instruments, and may retard the development of an acceptable conventional MBS format.

In summary, the actuarially sound FHA mortgage insurance programs and the GNMA-MBS guaranty program were created to foster support for homeownership and assure access to the credit markets. These programs are remarkably successful at achieving these goals, at no cost to the Treasury. However, the task is not yet finished. The 1980s represent a clear challenge to the housing and mortgage finance industries to deliver adequate supplies of affordable mortgage credit to unprecedented numbers of potential home owners. The FHA and GNMA-MBS programs will help to address those needs efficiently, unless credit budget ceilings restrict their operations. This Congress will decide whether this Nation's commitment to housing its citizens remains one of its important goals.

MBA appreciates the opportunity to testify before this Subcommittee, and would be happy to answer any questions or provide additional material upon request.

STATEMENT OF CUSHING DOLBEARE, PRESIDENT, NATIONAL LOW INCOME HOUSING COALITION

Senator HUDDLESTON. Is Ella Mae Horse here?

Cushing Dolbeare is here?

Yes.

Mr. DOLBEARE. Thank you very much.

I hope that the fact that this committee is somewhat ahead of schedule will also mean that somehow you are going to be able to find additional funds for low-income housing.

Senator HUDDLESTON. As efficient as we are, I wouldn't be surprised.

Mr. DOLBEARE. All right, sir. I certainly hope so.

I wanted to begin by thanking you and the other members of this committee for what you did in 1983 to keep low-income housing programs alive. I hope that the necessity to enact appropriations for low-income housing programs in the absence of an authorization bill will not be repeated, but in the event there is no authorization, we also commend you for what you did for 1983 and urge you, again, to keep alive some form of Federal support for assisted housing, because the people in this country who are homeless and without shelter should not be victimized by the inability of Congress and the administration to reach agreement, or even the two halves of Congress to reach agreement on appropriate housing legislation.

We see today a picture which has been in existence for some time of growing housing needs and diminishing resources made available to meet those needs. My testimony goes on at some length to indicate the extent of those needs and the extent of the diminishing resources.

Chart 3 in my testimony, for example, shows that in 1980, tax subsidies for housing-related tax deductions, primarily mortgage interest and property tax deduction, but also other provisions of the Internal Revenue Code, cost the Federal Treasury approximately $26.5 billion.

We also appropriated—or perhaps I should say, you also appropriated—$26.5 billion for additional budget authority for low-income housing assistance, so that the two levels were the same, except, of course, that cost of the tax subsidy was a 1-year cost, and the $26 billion for low-income housing assistance was spread out over 15 to 30 years, and some of it, of course, would not be paid until the next century.

Also, although it is not mentioned in my prepared statement, in 1980 the accumulated amounts of all the housing payments that had ever been made by the Department of Housing and Urban Development and its prececessor agencies for low-income housing assistance was approximately $26 billion, so that we paid as much through the tax system in subsidies for mortgage interest and property tax deductions and other housing-related tax deductions in 1 year as we have ever spent, cumulatively, in outlays in providing housing assistance for low-income people.

When you look around, as you may, and feel frustrated that we have had the Federal housing programs for almost half a century, and we still have such urgent and growing low-income housing needs, Mr. Chairman, I think that is the answer.

We have tried to deal with a serious social problem in terms that can best be described as token terms, and that is true regardless of whatever administration has been in office. We simply have never decided that low-income housing was a pressing national problem and we should do something to implement the national goal of a decent home and suitable living environment for every American family.

Since 1980, the level of assistance for low-income families has been cut by two-thirds, and I am talking budget authority, and I am talking Congress having provided far more than the administration requested, while the cost of housing-related tax subsidies has gone up so that it is estimated for 1984 at $44 billion. So that we have a contrast, and if ever there should be an issue of fairness, it seems to me that that issue is encapsulated here, that while we have been cutting the heart of the low-income housing program, we have been allowing the entitlement to housing assistance for whom everybody would agree they do not need it as much as low-income housing families. I'm not saying the middle-income families don't need it, but they certainly don't need it as much. That entitlement has been uncontrolled and untouched. I think we need to look at what we are doing in terms of fairness and equity.

Perhaps more serious is the impact of the housing cuts that have been made in the last 3 years has yet to be felt, because the units in the pipeline have been built, thanks again to the efforts of this committee and others, and are being occupied, so that while additional reservations for low-income housing units, including rent certificates or section 8 certificates or vouchers or however you want to describe them, have been dropping sharply, the level of occupants in the additional units is still at approximately the level it was at in 1980.

It won't be until 1984 or 1985 that we will really feel the results of what has already been done to low-income housing programs.

In spite of our inadequate efforts to deal with low-income housing problems, the fact is, as the President's Commission on Housing stated so dramatically, for every family living in assisted housing, after 40 years of effort, there are still three very low income renter households who cannot attain housing assistance and who probably want housing assistance. Moreover, if you take the administration's proposal for vouchers at the rate at which they propose to implement the vouchers or section 8 certificates, it will take 100 years to provide certificates at the rate at which they want to provide them, incrementally, for the families that the President's Commission on Housing have said are very low income families in urgent need of housing assistance.

If they take their rental rehabilitation proposals, it will take 146 years to provide—assuming they're correct about the number of rehabilitated units that will be generated, and assuming they are correct about the extent of the need—it will take 146 years to meet the needs which they have identified for housing rehabilitation with the programs at the level that they have proposed.

We have, of course, some recommendations, and I know they are familiar to you. We urge funding for as much additional housing production as is possible under the limits of whatever is adopted as a budget resolution or authorization bill. That should be additional public housing production primarily for large families.

The 220 program which the administration has, of course, endorsed, needs additional funding. We would urge, in addition, if a new production program is authorized and if it is adequately targeted, that that program be funded as well.

Second, and perhaps even more important, we need to maintain our present stock of assisted housing. Inadequate though it is, one-third of all very low income elderly households, one-third of all very low income single-parent households, and one-third of all very low income minority households, renter household, in each case, live in assisted housing.

We cannot afford, through appropriating inadequate operating subsidies or modernization funds or permitting HUD to demolish or dispose of assisted housing units, to let this stock decrease.

So we urge full appropriation of $2.5 billion for public housing modernization, appropriation of the full amount of appropriation operating subsidies, and we would urge that you adopt some kind of policy statement in support of whatever measures are reasonably necessary to retain the present stock of assisted housing rather than letting it grow through property disposition or through lack of other administrative constraints.

Two other points: We would support the full amount for the community development block grant program. We urge your attention to housing counseling. It is a small program. In 1980, it was funded at $12 million, particularly with more and more people being thrown on their own resources to find adequate housing, and with the amount of assisted housing really not anywhere close to meeting the need, we would urge that you put as much money as possible, up to $12 million, into housing counseling programs so assist people to find housing where they can; and, finally—and this is a personal note based on my own work and my own research—I would have deep concern that HUD's research programs have dropped from $40 million in about 1980 to about $20 million now.

I use the annual housing survey regularly in the work that I do, and I think it is critically important that the annual housing survey, particularly if it is going to be used as a basis for determining payment standards under a voucher system, that there be adequate funding to do the job that needs to be done through the annual housing survey.

The community development block grant program has been independently evaluated for 5 years; that evaluation is coming to an end. Yet we have made significant changes in the community development block grant program, and it is a tragedy if we suddenly ended that independent evaluation of CDBG just at the point where the changes that were made in 1981 are beginning to be reacted to by the recipients of block grant funds.

I think in a program where you have outlays, at a department where you have outlays of $13 billion, that it is not appropriate to limit research and program evaluation to such a small amount.

I have lots of reservations about the manner in which the research is conducted, but it just seems to me it is penny-wise and pound-foolish not to provide and not to insist, indeed, on an adequate research and program department at the Department of Housing and Urban Development.

The last HUD statistical yearbook was published in 1969. I called HUD for some more recent figures. I was told, "We don't really have more recent figures, because we haven't got the information reliably on who is living in assisted housing since 1979, because OMB didn't approve the form that we need to get that information."

Well, I think that is just ridiculous. To not be able to know what it is we are doing or know what it is we need to be doing is simply inexcusable.

I would urge as you look at this. It doesn't involve much more, but it is certainly something which I think merits serious attention by this committee and by other committees of the Congress.

Thank you, very much.

Senator HUDDLESTON. Thank you, very much, Mrs. Dolbeare.

Your suggestions are well founded and well thought out, and we appreciate them. They will certainly be taken into consideration.

Ms. DOLBEARE. Thank you.

Senator HUDDLESTON. Thank you.

[The statement follows:]

STATEMENT OF CUSHING N. DOLBEARE, PRESIDENT, NATIONAL LOW INCOME HOUSING COALITION

The National Low Income Housing Coalition wishes, first, to thank this subcommittee for its role in keeping low income housing programs alive during 1983. Without your intervention last year, and your willingness to appropriate in the absence of authorizing legislation, low income housing would be far worse off than it is today.

We know that this Subcommittee shares our concern with meeting the housing needs of low income people, and our frustration that the available resources fall so far short of the need. Because the potential resources are so inadequate to the task — achieving the national goal of a decent home and a suitable living environment for every American family -- it is easy to focus on the best that can be done with the resources at hand and to overlook the urgent need to find ways to meet our steadily growing low income housing needs.

This testimony will attempt to set the context of low income housing needs and the diminishing federal program response to them. It will then deal with a number of the specific proposals made by the Administration and others.

THE CONTEXT: LOW INCOME HOUSING NEEDS

The decade of the 1970's was one of rapid housing change. Among other things, it saw, with the completion of almost one million units authorized by the Housing Act of 1968 and an additional 1.2 million units under the Section 8 program, a substantial increase in the subsidized housing inventory. Even so, while housing progress was marked for most people, low income people fell further and further behind.

Between 1970 and 1980, according to the Annual Housing Survey, the number of occupied housing units increased by 27%. Home ownership continued to rise, though more slowly than during the 1950's and 1960's. In 1980, 65.6% of all households owned their homes, compared to 62.9% in 1970. The number of units lacking some or all plumbing facilities -- a traditional measure of housing quality -- dropped by 46%. Nevertheless, there were still 2.4 million units lacking plumbing. (See Table 1 for significant 1970-80 changes.)

Tenure continued to be closely related to income. In 1980, more than half of all households with incomes below $10,000 rented. In contrast, only 29% of those with higher incomes rented.

Housing costs have risen far more rapidly than incomes. In 1970, median renter income was $6300 and median rent was $108. By 1980, median renter income had risen to $10,500, a 67% increase, but median rent was $241 per month, a 123% increase. Converted to constant dollars, we estimate the change in income and rents or housing costs as follows:

Income and housing costs, 1970 and 1980, in 1972 constant dollars

	1970	1980	Change	
Median renter income	$6810	$8316	$1506	22.1%
Median rent	117	191	74	63.2%
Median owner income	$10486	$15682	$5196	49.6%
Median value	$18486	$40630	$22144	119.8%
Median monthly cost				
Unmortgaged	65	104	39	60.0%
Mortgaged	186	291	105	56.5%

Moreover, the greatest problems were at the bottom of the income scale. It is almost impossible to convey the intensity and magnitude of the housing problems of our very lowest income renters. The charts on the following pages are an effort to do so. Chart I shows the changes in housing affordability for renters between 1970 and 1980. In 1970, there were 5.7 million households with incomes under $3,000 and another 2.7 million households with incomes between $3,000 and $5,000. At the same time, there were 8.2 million units renting for less than $75 per month (30% of $3,000) and another 6.7 million units at rents between $75 and $125 per month. In other words, there were 5.6 million more units renting for less than $125 per month than there were renter households with incomes below $5,000. Even so, the situation was far from satisfactory: many of the units in this low rent range were seriously substandard; or they were the wrong size; or they were in the wrong locations; or the owners discriminated against would-be tenants; or, finally, they were occupied at bargain rents by higher income households.

By 1980, the situation was infinitely worse, and although hard data is not yet available, we have every reason to believe that the past two years have been even grimmer. In 1980 there were still 2.7 million renter households with incomes below $3000, but the number of units renting for less than $75 had dropped to 2.4 million. There were also 0.6 million more renter household with incomes between $3000 and $5000 than units at rents between $75-125.

> In 1970, a family with an income of $3,000 (the top of the range) at the median rent of $85 paid by the 5.8 million renter households with incomes below $3000 would have spent 34% of its income for shelter, leaving $165 for all other needs.
>
> In 1980, the family with an income of $3,000 at the median rent of $179 paid by the 2.7 million households with incomes below $3,000 would have spent 72% of its income for shelter, leaving only $71 for all other needs.

Moreover, only 19% of the renter households in this lowest income bracket lived in subsidized housing in 1980. More than half, 51%, were households of two or more people; 5% were households of five or more; 49% were single person households. More than one quarter, 27%, were female-headed households; 13% were married couples with no other nonrelatives in the household; 6% were male-headed households. There were children under 18 in 27% of the households, with 6% having three or more children. Only 4% paid less than 25% of income for rent; 59% paid 60% or more. Ten percent lived in units lacking some or all plumbing facilities; 4% were overcrowded. Twenty-nine percent were black; 8% were of Hispanic origin. All had incomes below 75% of the poverty level. Forty-six percent lived in central cities; 31% lived outside of metropolitan areas.

These households are the poorest of the poor, but in 1980 they were less than one third of all households with incomes below the poverty level. There were also another 3.3 million renter households with incomes above $3,000, but below the poverty level, and another 4.9 million owner-occupants below the poverty level.

In other words, when we speak of low income housing needs, we are, by the most conservative estimates, talking about millions of people: 29 million in all, including more than 11 million children (4 million of them under six) and 4 million elderly people.

President Reagan's Commission on Housing, in its report last year, used a less conservative estimate of housing need: households with incomes below 50% of median. There are 20 million such households, half of them renters. Only one quarter of these renter households are now in subsidized housing. In other words, for each family now in low income housing — after close to half a century of providing housing assistance -- there are three others who need it, who probably want it, and who can't get it.

This is reflected in the very high rent-income ratios paid by households with incomes below $5000: almost all of them pay more than half their incomes for shelter. In contrast, as Chart II shows, very few households with incomes above $20,000 pay as much as one quarter of their incomes for rent, including utilities.

The achievements of our housing assistance efforts over the last half century sharply contrast with this picture of housing need. At the end of fiscal 1984, if all goes as planned, HUD will be providing housing assistance to not quite four million households and the Farmers Home Administration will be assisting another million.

A rough picture of the characteristics of households living in much assisted housing is provided by a recent Census Bureau report. The report covers only rental housing, omitting the owner-occupied units assisted under HUD's Section 235 and FmHA's 502 programs. Thus, the total picked up by this survey is well below the actual number of units subsidized. It includes occupied units assisted through public housing, Section 8 and other rental subsidy programs. About 11% of all renter households received federal housing assistance in 1981. But, significantly, almost one third of all female-headed households with incomes below the poverty level lived in assisted housing, as did almost 37% of elderly households. Some 43% of assisted housing tenants also received food stamps, and four fifths of these households were below the poverty level. (See Table 2.)

The characteristics of low income housing residents belie many stereotypes. Three fifths were white. Three fifths were family households, but more than half of these were headed by women with no husband present. There were children in just under half of all households. Half of all assisted housing was in central cities; another quarter was outside metropolitan areas. (See Table 3 for additional details).

FUNDAMENTAL ELEMENTS OF AN ADEQUATE LOW INCOME HOUSING PROGRAM

The National Low Income Housing Coalition is now embarked on a process of developing specific proposals for a housing program that will, in fact, provide decent, affordable housing for all. We urge that the Congress reaffirm this national goal and act to make significant progress toward meeting it.

An adequate low income housing program would, we believe, incorporate the following elements:

- An adequately funded entitlement, income-based housing assistance program to enable low income people to obtain decent housing at costs they can afford.
- Production and preservation programs to meet those low income housing needs which cannot be met by income-support programs alone.
- Strengthened fair housing laws and enforcement and a strong reaffirmation of the federal government's role in guaranteeing fair access to housing.
- A strong role for community based, nonprofit organizations in the implementation of housing programs, along with the availability of federal assistance to meet the broad range of housing needs at the neighborhood and community level.
- Retention of the current stock of federally assisted and insured housing now occupied by low and moderate income people for their use and provision of the necessary funds to maintain it in viable condition. (This includes all present public housing, HUD-assisted, HUD-insured and HUD-held units, as well as units assisted by the Farmers Home Administration.)
- No displacement of low income people from their neighborhoods by either public or private action.
- Tax reform to curb massive housing subsidies through the tax system to middle and upper income people, particularly as long as budget constraints inhibit adequate housing aid to low income people. The cost of housing-related tax subsidies has risen from $26 billion in 1980 to an estimated $43 billion in 1984. At the same time, new budget authority for low income housing is set, under the Administration's proposals, to drop from $26 billion in 1980 to $0.5 billion in 1984. (See Chart III.)
- Monetary and credit policies to provide reasonable financing costs for housing and limit credit-related sharp fluctuations in building which increase the costs, prices, and rents of all housing.

We believe that these elements provide the framework for a viable approach to meeting this nation's housing needs and we urge that they be used by this committee as a test for its actions this year: that you take no action which moves us away from these objectives.

SPECIFIC RECOMMENDATIONS ON PENDING APPROPRIATIONS

For most of the last half century, housing has not been a partisan issue. Low income housing programs have had the support of both Republicans and Democrats. Moreover, there is a broad and growing constituency of concerned individuals and organizations that support expanded federal assistance to meet low income housing needs.

Yet, since 1980, low income housing programs have been cut savagely. The initial budget request for additional low income housing assistance for 1984 was, in constant dollars, only 1.2% of the level proposed by President Gerald Ford just before he left office. It was one-sixtieth of the amount actually appropriated for fiscal 1981, before the cuts, cancellations and rescissions began.

AN APPROPRIATION OF $30 BILLION IN BUDGET AUTHORITY FOR ADDITIONAL LOW INCOME HOUSING ASSISTANCE IS NEEDED TO RESTORE US TO THE 1981 LEVEL.

Depending on the approach used, this would require somewhere between $1.5 and $1.8 billion in contract authority: the limit on maximum annual expenditures.

Compared to the reality of what will be possible this year -- and we recognize that this subcommittee will deal within the realm of what is possible -- this is an impossible dream. But failing to realize it will mean that decent housing will remain an impossible dream for hundreds of thousands of low income people who urgently need help.

There is, unfortunately, no way of providing adequate housing assistance for low income people without spending or committing money for it. Just as we do not expect to be able to provide education, or health care, or highways without significant costs, we should recognize that an adequate low income housing program will require increased spending. We can and should find more efficient program approaches, but we cannot provide decent housing with mirrors or by reshuffling past appropriations.

Moreover, the cuts of the past three years have not yet really begun to be felt, as Chart IV demonstrates. While reservations for construction or rehabilitation of assisted housing have been steadily dropping, completions (and therefore occupancies) are still going up: the result of the decision made by Congress last year that the pipeline should be built, not cancelled.

The Administration has made much of addressing the problem of housing affordability. But it does not do so. Even the 90,000 additional units proposed in the 1984 budget is not a net addition. More than half of the funds come from carry-over balances, meaning that funds were already provided in prior years. So the net increase is closer to 45,000 units. At this rate, it would take 150 years to provide assistance for just the renter households in 1980 who met the Administration's proposed criteria for need and eligibility.

WE MUST RETAIN THE PRESENT STOCK OF SUBSIDIZED HOUSING FOR LOW INCOME PEOPLE.

The Administration is proposing repeal of the requirement that HUD-foreclosed multifamily projects be retained as subsidized housing upon disposition. It is also proposing demolition or disposition of about 100,000 public housing units. We strenuously oppose both of these proposals. A time of increasing housing need is not the time to get rid of what little assisted housing we have. If there are isolated cases where the housing is truly not viable, then there should be one-for-one replacement by units of the same size as those let go or destroyed.

We urge appropriation of $2.5 billion for public housing modernization. Moreover, the Administration's current practice of offering 50 cents in modernization money for each dollar of public housing development funds that is recaptured should be ended. If development and modernization are to be fungible, then it should be on a dollar-for-dollar basis. We would prefer, however, a modernization appropriation which is adequate to do the job and re-use of any recaptured public housing development funds for public housing.

We reject the Administration's proposal to combine modernization and operating subsidies into a single appropriation, based on rents in the private housing market, and urge, for 1984, appropriation of the full amount required under the Performance Funding System.

CONTINUED CONSTRUCTION AND REHABILITATION OF HOUSING UNITS EARMARKED AND SUBSIDIZED FOR LOW INCOME PEOPLE IS IMPERATIVE.

Last year, the President's Commission on Housing discovered, to its surprise, that for the most part it would be cheaper to house people in existing public housing projects than to provide vouchers. Why? Because the projects were built when costs were lower and present costs reflect this. And, although new construction may seem expensive today, the same thing is certain to happen several decades from now. Moreover, the present stock of rental housing does not fit the needs of low income people: those who need assistance most are large families and elderly or handicapped people.

In support of its proposed rental rehabilitation program, HUD has stated that there are 1.8 million seriously deficient rental units in the inventory, along with another 2.6 million units with specific inadequacies. To deal with that need, a program estimated at 30,000 units a year is proposed with no assurance that the improved units will in fact be occupied by lower income people. At this rate, the present need would be met in 146 years or, if there were some way to target aid to the worst units, they could be rehabbed in 60 years.

Experience with a variety of programs and approaches, from Section 8 to welfare shelter allowances, should have taught us that we cannot rely on market forces to provide adequate housing for low income people. The rental rehabilitation approach will only work for a multitude of nonprofit and community based groups now involved in housing rehabilitation for low income people if the vouchers, which make the after-rehab rents affordable, can be tied to the units. Otherwise, financing cannot be obtained.

We are hopeful that there will be a housing authorization act this year and that the act will establish a rental housing production program. The Senate Banking

Committee has agreed to report a bill establishing a rehabilitation and development grant program; the House Banking Committee bill contains a $1.3 billion rental production program.

The National Low Income Housing Coalition supports the general approach embodied in these programs: flexible subsidies which will, for the most part, be used for projects which can be expected both to deal with critical rental housing shortages and to serve a relatively broad range of income groups. We urge, however, that federal funds authorized or appropriated for whatever rental housing production program emerges from the legislative process this year be used to assist people who could not otherwise afford to live in the housing, and that priority be given to projects which exceed the required 20% of units for lower income people.

The need for additional units for lower income people is incontrovertible, as Chart V shows. Even if we had "perfect" housing markets, with all the lowest rent units available to, suitable for, and occupied by low income families, there are still about twice as many low income renter households as there are affordable units, in the entire housing stock, at rents they can afford. The situation is reversed as incomes rise.

Moreover, if very low income people are to be served by the program, as they should be, then there must be a system for coupling Section 8 Existing Certificates, or vouchers, to the units provided. This will mean appropriating the needed funds and either requiring or giving local communities and states the flexibility to tie vouchers to specific units. Moreover, this requirement cannot be limited to initial rent-up; it needs to run for the subsidy period and be monitored to assure that it is being followed.

ADDITIONAL FUNDS FOR PUBLIC HOUSING DEVELOPMENT SHOULD BE APPROPRIATED FOR 1984.

Public housing has demonstrated that it is the only assisted housing program which has been able to provide a significant volume of units for hard-to-house low income families. The conference report on the continuing resolution last year contained a commitment to provide additional funds for public housing once the pipeline is cleared. We urge you to appropriate funds for additional public housing development. It is unlikely, to put it mildly that the rental housing developed under the program proposed in the bill reported by the Senate Banking Committee, even if more adequately targeted, will serve the same constituency of needy households as public housing: large households, often with single parents, and very low incomes. There are far more large renter households than there are large rental units in the housing stock: only public housing has the potential to fill this vital gap.

OTHER HUD PROGRAMS.

While the thrust of this testimony has been on HUD's low income housing programs and policies, several other HUD programs and activities are critical to low income people.

- We support full funding of the Community Development Block Grant program, particularly if the reauthorized program provides more effective targeting of CDBG funds than HUD currently plans to require.
- We urge appropriation of $12 million for housing counseling agencies. Comprehensive housing counseling has proven its worth. The need for counseling, and for broadening the services of counseling agencies, is growing as the housing problems of low income people are compounded and as housing assistance programs rest more and more on assisting people to pay the rent in existing units.

CONCLUSION

In addressing appropriations for low income housing, we urge this Committee to remember three things:

- The housing needs of low income people are desperate and growing.
- Low income housing programs have already been cut far more than other low income programs.
- Housing subsidies through the tax system for middle and upper income people are untouched, and still increasing.

Most important, housing is not just bricks and mortar. And in dealing with housing issues we should ask ourselves not just how many units we will have, but how our families should live and what kinds of communities and neighborhoods they should live in.

Chart I. Significant changes, 1970-1980, in housing affordability for renters
(Numbers in thousands)

1970		
HH under $3000	5769	***********************************
Units under $75	8208	**
1980		
HH under $3000	2748	*****************
Units under $75	2458	***************
1970		
HH $3000-4999	3565	**********************
Units: $75-124	6700	***
1980		
HH $3000-4999	3598	**********************
Units: $75-124	2987	******************
1970		
HH $5000-6999	3661	**********************
Units $125-174	3967	************************
1980		
HH $5000-6999	2882	******************
Units $125-$174	4575	****************************

CUMULATIVE

1970		
HH under $5000	9334	*****************
Units under $125	14908	***************************
1980		
HH under $5000	6346	************
Units under $125	5445	**********
1970		
HH under $7000	12995	************************
Units under $175	18875	**********************************
1980		
HH under $7000	9228	*****************
Units under $175	10020	******************
1970		
Total renter HH	23560	***
White	19601	************************************
Black	3607	*******
Married couples	17171	*******************************
Other male HHr	1143	**
Other female HHr	3270	******
Single persons	6389	************
1980		
Total renter HH	27556	**
White	21894	**
Black	4827	*********
Married couples	17772	********************************
Other male HHr	2238	****
Other female HHr	5716	**********
Single persons	9784	******************

Source: Low Income Housing Information Service (based on data from 1980 Annual Housing Survey)

CHART II.

RENT-INCOME RATIOS, BY INCOME, U.S., 1980.

Income under $3000		
Under 25%	135000	*
25-34%	210000	**
35-49%	231000	**
Over 50%	2172000	**********************
Income $3000-6999		
Under 25%	1086000	***********
25-34%	956000	**********
35-49%	1541000	****************
Over 50%	2895000	******************************
Income $7000-9999		
Under 25%	1008000	**********
25-34%	1248000	*************
35-49%	1146000	************
Over 50%	457000	*****
Income $10000-14999		
Under 25%	2742000	****************************
25-34%	1894000	*******************
35-49%	738000	********
Over 50%	180000	**
Income $15000-19999		
Under 25%	2829000	*****************************
25-34%	691000	*******
35-49%	131000	*
Over 50%	20000	
Income $20000 or more		
Under 25%	4889000	**
25-34%	316000	***
35-49%	30000	
Over 50%	6000	

Source: Compiled by Low Income Housing Information Service from 1980 Annual Housing Survey Data.

CHART III.

HOUSING PAYMENTS, BUDGET AUTHORITY, AND HOUSING-RELATED TAX SUBSIDIES, 1980-84, (In Millions of dollars

1980		
Tax subsidies	26461	*******************************
Budget authority	26680	*******************************
Housing payments	4529	*****
1981		
Tax subsidies	33330	***************************************
Budget authority	30170	***********************************
Housing payments	5747	*******
1982		
Tax subsidies	36625	***
Budget authority	17374	********************
Housing payments	6880	********
1983		
Tax subsidies	39760	**
Budget authority	8652	**********
Housing payments	7774	*********
1984		
Tax subsidies	42835	**
Budget authority	515	*
Housing payments	8532	**********

Source: Compiled by Low Income Housing Information Service from Federal Budget documents.

CHART IV.

RESERVATIONS, STARTS, AND OCCUPANCIES (COMPLETIONS) UNDER THE SECTION 8 AND PUBLIC HOUSING PROGRAMS (NEW CONSTRUCTION AND SUBSTANTIAL REHABILITATION)
1975-84

```
1975
  Reservations     76122  ****************
  Starts           24532  *****
  Occupancies      47674  **********

1976
  Reservations    199227  ******************************************
  Starts           55222  ************
  Occupancies      93371  ********************

1977
  Reservations    226832  ************************************************
  Starts          118386  *************************
  Occupancies      31193  *******

1978
  Reservations    190554  *****************************************
  Starts          170231  ************************************
  Occupancies      86275  ******************

1979
  Reservations    234700  **************************************************
  Starts          175119  *************************************************
  Occupancies     144874  ****************************************

1980
  Reservations    141758  ***************************************
  Starts          173249  ************************************************
  Occupancies     150394  ******************************************

1981
  Reservations    122674  **********************************
  Starts          106035  *****************************
  Occupancies     180057  **************************************************

1982
  Reservations     45908  ****************
  Starts          112931  ****************************************
  Occupancies     138714  *************************************************

1983 HUD Estimate
  Reservations     16600  ******
  Starts           72000  **************************
  Occupancies     141000  **************************************************

1984 HUD Estimate
  Reservations     10000  ****
  Starts           45000  ******************
  Occupancies     124963  **************************************************
```

Source: Low Income Housing Information Service (based on information in HUD Budget Summaries.

CHART V.

1980 Renter Households and Units in Affordable Rent Range

Note: This chart compares the number of renter households, by income, in 1980 with the number of rental units in the housing stock (regardless of location, quality or availability) in a rent range that represents 25% of income.

Income/Rent Range	Households or Units	
Income under $3000	2,748,000	**************
Units under $63	1,252,000	******
Income $3000-4999	3,589,000	************* ****
Units: rent $63-104	1,451,000	*******
Income $5000-6999	2,882,000	**************
Units: rent $105-146	2,351,000	************
Income $7000-9999	3,862,000	*******************
Units: rent 147-208	5,526,000	****************************
Income $10000-14999	5,553,000	****************************
Units: rent 209-313	10,067,000	**
Income $15000-20000	3,672,000	******************
Units: rent 314-417	4,464,000	**********************

Source: Low Income Housing Information Service (based on 1980 Annual Housing Survey Data)

TABLE 1.

Table 1. Significant changes in the housing inventory, 1970-80

			1970-80 Change	
	1980	1970	Number	Percent
All housing units	88207	68672	19535	28.4
Vacant/seasonal	2183	973	1210	124.4
Year-round units	86204	67699	18505	27.3
Owner-occupied	52516	39886	12630	31.7
White	48028	37005	11023	29.8
Black	3776	2568	1208	47.0
Renter-occupied	27556	23560	3996	17.0
White	21894	19601	2293	11.7
Black	4827	3607	1220	33.8
Vacant	5953	4254	1699	39.9
Lacking plumbing	2359	4398	-2039	-46.4
Owner-occupied	765	1662	-897	-54.0
Renter-occupied	988	1849	-861	-46.6
Median no of rooms	5.1	5.0	0.1	2.0
Owner-occupied	5.8	5.6	0.2	3.6
Renter-occupied	4.0	4.0	0	0
Median no of persons				
Owner-occupied	2.6	3.0	-0.4	-13.3
Renter-occupied	2.0	2.3	-0.3	-13.0
Married couples, no nonrelatives	55281	47977	7304	15.2
Owner-occupied	37509	30806	6703	21.8
Renter-occupied	17772	17171	601	3.5
Other male householder	4264	2441	1823	74.7
Owner-occupied	2026	1298	728	56.1
Renter-occupied	2238	1143	1095	95.8
Other female householder	10743	6289	4454	70.8
Owner-occupied	5027	3019	2008	66.5
Renter-occupied	5716	3270	2446	74.8
1-person households	17738	11151	6587	59.1
Owner-occupied	7954	4762	3192	67.0
Renter-occupied	9784	6389	3395	53.1
Median Income				
Owners	19800	9700	10100	104.1
Renters	10500	6300	4200	66.7
Median value, owner-occupied	51300	17100	34200	200.0
Median rent, renter-occupied	241	108	133	123.1
Renter income				
Under $3000	2748	5769	-3021	-52.4
$3000-4999	3598	3565	33	0.9
$5000-5999	1445	1847	-402	-21.8
$6000-6999	1437	1814	-377	-20.8
$7000-9999	3863	4620	-757	-16.4
Rental units				
Under $80	2622	8755	-6133	-70.1
$80-99	1114	3332	-2218	-66.6
$100-149	3676	5641	-1965	-34.8
$150-199	5103	2293	2810	122.5
$200-299	8307	806	7501	930.6

Source: Low Income Housing Information Service (based on data in Annual Housing Survey: 1980, Part A, General Housing Characteristics.

Table 2. Total households, renter households, and households in subsidized housing

Housing Characteristic	All households			Renter households			Renter households in Subsidized housing		
	Total	Below poverty level		Total	Below poverty level		Total	Below poverty level	
		Number	%		Number	%		Number	%
All households	83527	11676	14.0	27210	6371	23.4	2873	1510	52.6
Female householder, no husband present	9403	3252	34.6	4645	2283	49.1	1044	706	67.6
Householder 65 or over	17312	3185	18.4	4076	1183	29.0	949	433	45.6
NONCASH BENEFITS									
Food stamps	7115	5600	78.7	4639	3816	82.3	171	119	69.6
School lunches	5356	3334	62.2	3053	2161	71.4	141	35	24.8
Medicaid coverage	8487	5561	65.5	4483	3569	79.6	261	120	46.0
Food stamps/school lunch/sub hsg	—	—	—	—	—	—	113	83	73.5
Food stamps/Medicaid/sub hsg	—	—	—	—	—	—	490	430	87.8
School lunch/Medicaid/sub hsg	—	—	—	—	—	—	53	30	56.6
All four	—	—	—	—	—	—	471	397	84.3
Total, hsg + food stamps							1245	1029	82.7

Source: Characteristics of Households and Persons Receiving Selected Noncash Benefits, 1981.

Table 3. Selected characteristics of households in subsidized housing, 1981 (numbers in thousands)

Characteristic	Total		Median	Below 100% of poverty			Below 125% of poverty	
	Number	Percent	Income	Number	Rate	Percent	Number	Rate
All households	2873	100.0	6055	1510	52.6	100.0	1931	67.2
White	1710	59.5	5959	804	47.0	53.2	1090	63.7
Black	1070	37.2	6081	659	61.6	43.6	781	73.0
Hispanic	229	8.0	6821	145	63.3	9.6	169	73.8
Family households	1724	60.0	7826	921	53.4	61.0	1103	64.0
Married-couple families	634	22.1	10838	195	30.8	12.9	272	42.9
Female householder, no husband present	1044	36.3	6033	706	67.6	46.8	811	77.7
Male householder, no wife present	46	1.6	—	21	45.7	1.4	21	45.7
Nonfamily households	1149	40.0	4573	589	51.3	39.0	828	72.1
Male householder	244	8.5	4869	113	46.3	7.5	160	65.6
Female householder	905	31.5	4511	476	52.6	31.5	667	73.7
Households with children under 18 years old	1397	48.6	7512	840	60.1	55.6	991	70.9
With children under 6	774	26.9	7524	496	64.1	32.8	571	73.8
Householder 65 or over	949	33.0	4863	433	45.6	28.7	648	68.3

Characteristic	Total		Median	Below 100% of poverty			Below 125% of poverty	
	Number	Percent	Income	Number	Rate	Percent	Number	Rate
Size of household								
Single person	1104	38.4	4530	564	51.1	37.4	796	72.1
2 persons	575	20.0	7056	246	42.8	16.3	301	52.3
3 persons	455	15.8	6624	251	55.2	16.6	304	66.8
4 persons	370	12.9	8668	204	55.1	13.5	253	68.4
5 persons	196	6.8	9381	125	63.8	8.3	139	70.9
6 persons	93	3.2	9621	56	60.2	3.7	68	73.1
7 persons or more	81	2.8	10565	64	79.0	4.2	70	86.4
Residence								
Inside metro areas	2157	75.1	6050	1139	52.8	75.4	1460	67.7
In central cities	1473	51.3	5764	841	57.1	55.7	1044	70.9
Outside central citie	684	23.8	6656	299	43.7	19.8	416	60.8
Outside metro areas	716	24.9	6071	371	51.8	24.6	471	65.8
Worked at fulltime jobs	804	28.0	10715	255	31.8	16.9	352	18.2
Worked at parttime jobs	315	11.0	6789	155	49.2	10.3	196	62.2
Did not work	1695	59.0	4568	1097	64.7	72.6	1371	80.9

Source: Characteristics of Households and Persons Receiving Selected Noncash Benefits, 1981

Table 4.

VARIOUS MEASURES OF INCOME AND RENTAL HOUSING AVAILABILITY, BY HOUSEHOLD SIZE, 1980

Index	One Person	Two Persons	Three Persons	Four Persons	Five Persons	Six Persons	Seven Persons	Eight Persons
Poverty	4190	5363	6565	8414	9966	11269	13955	—
125% of poverty	5238	6704	8206	10518	12458	14086	17444	—
150% of poverty	6285	8045	9848	12621	14949	16904	20933	—
Median	8162	17506	21737	24410	24857	24415	23332	—
80% of median	6530	14005	17390	19528	19886	19532	18666	—
50% of median	4081	8753	10869	12205	12429	12208	11666	—
HUD calculation (% of family median income)								
Lower income	50	64	72	80	85	90	95	100
Very low income	30	40	45	50	54	58	62	66
HUD "80% of median"	10512	13455	15137	16818	17870	18921	19972	21023
HUD "50% of median"	6307	8409	9460	10512	11352	12193	13034	13875
Median renter income	8000	11900	11900	13100	12300	11600	—	—
% of HUD "80%"	76.1	88.4	78.6	77.9	68.8	61.3	—	—
% of HUD "50%"	126.8	141.5	125.8	124.6	108.3	95.1	—	—
Renter households								
Total	9784	8005	4307	2952	1358	1149		
HUD lower income	5947	4499	2745	1887	961	793		
HUD very low income	3900	3164	1705	1160	622	604		
Percent lower income	60.8	56.2	63.7	63.9	70.8	69.0		
% very low income	39.9	39.5	39.6	39.3	45.8	52.5		
Below Poverty	2268	1607	1103	886	535	558		
Below 125% of poverty	3076	2135	1444	1161	691	698		
Below 150% of poverty	3883	2648	1785	1420	847	793		
% below poverty	23.2	20.1	25.6	30.0	39.4	48.6		
% below 125% of poverty	31.4	26.7	33.5	39.3	50.9	60.7		
% below 150% of poverty	39.7	33.1	41.5	48.1	62.4	69.0		

Source: Estimated by LIHIS from 1980 Annual Housing Survey data

TABLE 5.

ESTIMATED RENTER HOUSEHOLDS ELIGIBLE FOR HOUSING ASSISTANCE, BY RACE, 1980
(Households in thousands)

	One Person	Two Persons	Three Persons	Four Persons	Five Persons	Six Persons	Total House-holds	Per-cent
Income								
80% of median income	$10512	$13455	$15137	$16818	$17870	$18921	--	--
50% of median income	6307	8409	9460	10521	11352	12193	--	--
Number of Households								
All renters	9784	8005	4307	2952	1358	1149	27555	100.0
Below 80% of median	5947	4499	2745	1887	961	793	16832	61.1
Below 50% of median	3900	3164	1705	1160	622	604	11155	40.5
All black renters	1429	1213	838	611	343	393	4827	100.0
Below 80% of median	990	884	628	482	291	277	3550	73.6
Below 50% of median	726	657	455	369	230	228	2664	55.2
All Hispanic Renters	414	541	486	410	219	279	2349	100.0
Below 80% of median	301	370	371	217	181	223	1664	70.8
Below 50% of median	158	244	246	190	122	166	1126	47.9
All white renters	7941	6251	2983	1931	796	477	20379	100.0
Below 80% of median	4656	3245	1746	1189	488	294	11618	57.0
Below 50% of median	3016	2264	1004	601	270	210	7365	36.1

Source: Low Income Housing Information Service (based on 1980 Annual Housing Survey data)

STATEMENT OF DAVID A. AFFELDT, COUNSEL, NATIONAL CAUCUS AND CENTER ON BLACK AGED, INC.

Senator **HUDDLESTON**. Mr. Edson is not here. Mr. Affeldt is, I believe. Are you ready now? We are ahead of schedule.

Mr. **AFFELDT**. Fine. I am ready.

Senator **HUDDLESTON**. We will move right on.

Mr. **AFFELDT**. It is one of the few times in my life I am early.

Thank you, Mr. Chairman.

The National Caucus and Center on Black Aging appreciates the opportunity to testify here today. I am appearing on behalf of Sam Simmons, who is the president of NCBA and was unable to attend.

We have a longer written statement which we would like to insert in the record.

Senator **HUDDLESTON**. The entire statement, of course, will be included in the record. We appreciate your summarizing it.

Mr. **AFFELDT**. Right. I will summarize the key points.

First, NCBA favors continuation of section 202 housing for the elderly and handicapped. Equally, we support sufficient lending authority for about 25,000 units. We believe that this is a realistic goal, because the stock of appropriate and affordable rental housing is declining for older Americans.

Elderly Americans, for example, jump at the opportunity to occupy section 202 housing. It is estimated that five older persons are on the waiting list for each available section 202 unit. Increasing housing stock is also needed because the elderly population is growing rapidly; presently at about 600,000 a year, for persons 65 or older, and, then, to compensate for recent reductions in the housing production.

We also realize that 25,000 units may not be legislatively attainable, given the present budgetary situation and the 14,000 units lending authorization in the HUD reauthorization legislation—H.R. 1 and S. 1338.

Therefore, we urge a minimum of 14,000 section 202 units, the same number that the fiscal year 1983 lending authority is expected to fund.

The House HUD subcommittee has also approved sufficient lending authority for the 14,000 units.

Second, NCBA recommends that the subcommittee insert report language urging HUD to maintain its efforts to increase minority sponsorship of section 202 housing. Language was inserted last year for fiscal year 1983. That effort has already yielded a positive result. We understand that HUD has set a goal of 17 percent for minority sponsors for section 202 housing. We are urging additional report language to assure that this is simply not a one-shot action.

Minority organizations have historically been unrepresented as sponsors of section 202 housing for the elderly and handicapped persons for different reasons. It often lacks the necessary capital to submit an application. Frequently, they do not have a prior track record, which causes their proposals to be downgraded. They may not have sufficient training in the draftsmanship jargon to complete applications for other funds.

Third, NCBA urges the subcommittee to retain funding for existing low-income housing programs. We favor continuation of new construction for low-income public housing. Public housing is the single most important source of Federal-assisted housing for the aged, especially the low-income minority elderly. More than 40 percent of all public housing units are occupied by older persons.

The House HUD subcommittee has approved funding for 10,000 new and substantially rehabilitated units and also funding for modernization. We believe these amounts are reasonable, and we would support them.

The public housing program has worked effectively for the elderly; new construction is now needed to meet the ageds' demand for new unit.

Fourth, NCBA recommends that the congregate housing program be funded at $10 million. The House HUD subcommittee did not provide any funding. This program provides such a wide range of services such as chore services, housekeeping, a meal in a central dining room, and others that enable older persons and other section 202 people to live in public housing rather than being prematurely institutionalized at a high cost.

It can prevent unnecessary or premature institutionalization.

Finally, NCBA is opposed to HUD's competitive bidding regulations because minority contractors and subcontractors would be adversely affected for a variety of reasons.

First, the majority of minority organizations do not have the venture capital to undertake competitive bidding. This requires a fairly significant amount of capital and an ability to absorb losses for unsuccessful bids. And minority organizations, as a general rule, simply do not have the necessary capital for this undertaking.

Second, contractors now provide much free technical assistance prior to initial endorcement because they know they will get the job. Architects are also willing to assist under these circumstances as part of the section 202 team, but they will probably be less willing to do this on a contingent basis, because they do not know who the contractors will be or whether it will be necessary to modify their plans. under competitive bidding, contractors and architects will probably spend as little time and money as possible until they are sure that they have the job.

Moreover, they may be inclined to ask for more up-front money under these circumstances.

Third, minority contractors have a much better opportunity to win contracts when they deal with minority dollars. However, if minority sponsors are effectively denied section 202 funding, the opportunities for minority contractors or subcontractors will, of course, be greatly limited.

In conclusion, housing problems for the elderly today have reached crisis proportions in many areas of our country, especially for the minority aged. They oftentimes experience multiple jeopardy because they are old, poor, and members of a minority group. Quite clearly, comprehensive and substantial response is necessary to come to grips with the elderly housing problems.

We have offered five proposals which we believe are reasonable and realistic, even during this austere period. Once again, we urge the subcommittee to adopt these measures.

Thank you, very much.

Senator HUDDLESTON. Thank you, very much, Mr. Affeldt.

I might point out that your recommendation regarding language urging HUD to maintain its effort to increase minority sponsorship of 202 projects and to provide technical assistance will be recommended by the subcommittee.

Mr. AFFELDT. Excellent. We are delighted to hear that. We appreciate that, Mr. Chairman.

Senator HUDDLESTON. Thank you, very much.

[The statement follows:]

STATEMENT OF DAVID A. AFFELDT, COUNSEL, NATIONAL CAUCUS AND CENTER ON BLACK AGED, INC.

Mr. Chairman and Members of the Subcommittee, the National Caucus and Center on Black Aged appreciates the opportunity to testify at your hearing on funding for housing programs for older Americans.

At the outset, we wish to commend you for your past support of elderly housing programs.

This support is needed now more than ever because housing continues to be a major problem for millions of older Americans.

A 1981 Louis Harris poll for the National Council on the Aging, for example, revealed that about one out of eight persons 65 or older considers housing to be a serious problem. The situation is substantially worse for older minorities.

One out of every three elderly Blacks and one out of every two aged Hispanics find their housing unsuitable.

NCBA will focus on four key proposals to improve housing conditions for older Americans, and especially elderly Blacks.

Section 202 Housing

First, NCBA urges that sufficient lending authority be provided for the Section 202 housing for the elderly and handicapped program to finance about 25,000 units.

We consider this to be a realistic and essential goal, for the following reasons.

The elderly population is growing rapidly--about 600,000 per year for persons 65 or older.

However, the stock of appropriate, affordable rental housing is declining for older Americans. Elderly persons jump at the opportunity to occupy Section 202 housing. It is estimated that five older persons are on the waiting list for each available Section 202 unit.

Section 202 housing has been one of the most effective programs ever developed, providing tailor-made housing for older Americans at a price within their reach.

Section 202 has funded about 2,600 projects and nearly 184,000 units during its existence. Yet, the program has only had one foreclosure.

A 25,000-unit funding level (about $1.025 billion) will not only provide more urgently-needed housing for older Americans, but it will also provide more jobs for America's labor force. This takes on added importance since unemployment is at a double-digit level now.

Report Language to Encourage Minority Sponsorship

Second, NCBA recommends that the Subcommittee insert report language urging HUD to maintain its efforts to increase minority sponsorship of Section 202 projects. Specifically, HUD should implement fully and effectively the provision in the 1979 Housing and Community Development Amendments which authorizes technical assistance to minority sponsors.

Congress inserted effective language for this purpose in the Fiscal Year 1983 Continuing Resolution. That effort has already yielded a positive result. We understand that HUD has set a goal of 17 percent for minority sponsors for Section 202 housing.

We are urging additional report language to assure that this is simply not a one-shot action.

Minority organizations have historically been underrepresented as sponsors of section 202 housing for the elderly and handicapped because:

-- They oftentimes lack the necessary capital to submit an application;

-- They frequently do not have a prior track record, which causes their proposals to be downgraded;

-- They may not have sufficient training in the grantsmanship jargon to compete successfully with other applicants for HUD funds; and

-- They have usually been outside the "good old boy" network at HUD and its area offices.

Low-Income Housing

NCBA further urges the Subcommittee to retain funding for existing low-income housing programs. We do not believe that a voucher system is the most effective way to increase the stock of affordable and suitable housing units for the elderly, especially the low-income aged.

NCBA favors continuation of new construction for low-income public housing. Public housing is the single most important source of federally-assisted housing for the aged, especially the low-income minority elderly. More than 40 percent of all public housing units are occupied by older persons.

The public housing program has worked effectively for the elderly. New construction is needed to meet the aged's demand for additional units.

Congregate Housing Services

Finally, NCBA recommends that the congregate housing services program be funded at $10 million.

This program provides a wide range of services--such as chore services, housekeeping, a meal in a central dining facility--to enable older persons in public housing and Section 202 housing to live independently, rather than be prematurely institutionalized at a much higher public cost.

Housing must be more than just bricks and mortar. Quite frequently, shelter must be combined with services to assist older persons to continue to live independently in their own homes, instead of nursing homes.

Congress recognized this need in authorizing funding on a longer term basis for congregate housing services.

NCBA does not believe that the congregate housing services program should be simply a demonstration program to test out innovative concepts to extend the span of independent living. We believe it should be a vital cog in a national housing strategy to improve the quality of life for "at risk" older persons who may wind up in a nursing home without appropriate supportive services.

Funding for congregate services is cost effective because it can prevent unnecessary or premature institutionalization.

Conclusion

In conclusion, housing problems for the elderly today have reached crisis proportions, especially for the minority aged. They oftentimes experience multiple jeopardy because they are old, poor, and members of a minority.

Quite clearly, a comprehensive and substantial response is necessary to come to grips with the elderly's mounting housing problems.

We have offered four proposals which are reasonable and realistic, even during this austere period.

Once again, we urge the Subcommittee to adopt these measures.

BRIEF RECESS

Senator **Huddleston**. Ms. Horse has not arrived.

Do we have any witnesses? No witnesses present.

This is probably a first when the number of Senators outnumbers the number of witnesses.

The subcommittee, then, will stand in recess for 10 minutes.

[A brief recess was taken.]

STATEMENT OF CHARLES EDSON, COUNSEL, NATIONAL LEASED HOUSING ASSOCIATION

Senator **Abdnor** [presiding]. The subcommittee will come to order.

We will continue with the hearings. The next witness is Charles Edson, counsel for the National Leased Housing Association.

Mr. Edson, we welcome you. I am sorry I am a few seconds late here. I am finding it hard to be in too many places at once. You may proceed. I can tell you that your entire statement will be made a part of the record if you care to summarize.

Go ahead.

Mr. **Edson**. Yes, sir, I will summarize. Also, this is the promptest schedule I have had on any schedule, so you are very well on time.

I am here today representing the National Leased Housing Association. Formerly, we were the spokesgroup for the section 8 program and, indeed, the section 23 program.

Now that those programs have met their demise, at least in the new construction aspects, we are really a spokesgroup for Government-related rental housing, and the need for rental housing is great and acute in many areas of the country, Even if we are going to have a voucher system that works for the utilization of our existing stock, we still have to have the rental stock in existence for that system to work, and that is what we are here today to advocate.

There have been estimates of the rental housing shortage that this country soon will be facing anywhere between 170,000 and 500,000 a year. What we are advocating today, and, indeed, what the authorizing committee has adopted, is not an expensive program on section 8, a deep subsidy program, but a shallow, not even subsidy program, but a program, basically, of second loans or other similar assistance, just enough to enable the builder of a multifamily project to get the project built. Then, upon the sale of the refinancing, the builder would have to give the money back to the Government.

We think it is a program to get the most bang for the buck.

The Senate Banking, Housing, and Urban Affairs Committee this week has reported out its bill with an authorization of $300 million for the new construction, substantial and moderate rehab aspects of the new program. We certainly urge this committee to urge this committee to appropriate the same amount that the authorizing committee has authorized. We think it is a very good initiative and well-deserving of our support.

Let me just say a word about the existing housing program which we also strongly support. There has been much discussion about vouchers or certificates, but that is really the section 8 existing program that has worked well for 9 years. We think it makes a lot of sense to house low-income people in decent existing stock rather than in new stock because of the money saving involved. That is why we like the existing section 8 program.

We also think this is a very handy program to utilize in conjunction with an FHA-insured project that is going on the rocks, because often the infusion of section 8 existing can prevent a default, which would prevent a charge on the Federal Treasury, a very creative use of that funding.

The administration this year requested some amendment money to amend section 8 existing contracts where the reserve is now running out. Under the section 8 program, a reserve fund was created so that rent increases could be paid every year. Section 8(c)(6) of the act says that HUD should replenish that reserve every year to keep it at an adequate level. In some cases, those reserves are running out, and HUD is looking to utilize some of its contract authority and amendment money to replenish its reserves.

This is, frankly, an initiative that will be before this committee just surfacing this year, but I think in future years it will be something that you have to be concerned with to keep up the sections of the new reserves under the construction program. I hate to analogize it to operating subsidies, but it is certainly the same sort of problem, hopefully, in no way as severe as the reserves created under section 8.

I think I would be remiss without calling attention to your piece of legislation that the authorizing committee passed which sounds certainly desirable, and as a dogowner myself, I would normally favor, and that is on the prohibition of the pets in elderly federally assisted projects, which I think is certainly a worthy goal. I just have to point out to the committee the increased expenses that will go with that, and that you may well be facing a need for extra operating subisidies in public housing and extra funding for your existing section 8 to pay the landlords for the additional expenses that having pets do have: Extra cleaning expenses, fumigation between tenants rentals and other matters.

A lot of people have been having a lot of fun on the so-called bill that went through the Senate committee without any problem, but let me tell you that it does have its financial implications.

With those key points in mind and bearing in mind the business schedule that this committee has, let me close there, of course, with thanks for the opportunity to appear before you today.

Senator Abdnor. Thank you, Mr. Edson.

We appreciate your testimony. We always look forward to it.

In your discussion of existing housing, you did not comment on the merits of the administration's proposed voucher system. Under what circumstances would you expect the voucher system to work?

Mr. Edson. I have had such problems in the last couple of years in discussing this, because I think it's a misnomer or it is presented as something new and different. Senator, the voucher system is really just a ramification of section 8 existing which we have. The administration proposes some changes. Some, I think, are good, which would allow a tenant to pay more than 30 percent of the family income for rent and get a better unit, or pay less and get a less good unit, as long as it meets quality standards.

My objections to it are that I think it could set the rent level too low at 45 percent median instead of 45 as an objection to it. But these really go to the details of an ongoing system and that the administration is proposing nothing new in vouchers. It has proposed the sensible use of existing housing. Overall, I agree with the conept.

Senator Abdnor. Good. We appreciate that because you have worked with HUD and fully understand it.

Relating to the schedule that they gave me here of all of you that have to appear, I guess we have to move right along. I will say thank you for your appearing, and I am sorry we can't take more time. I guess we have got a deadline to meet here.

Mr. Edson. Again, it is my pleased to be here again this year.

Senator Abdnor. Thank you.

Mr. Edson. Thank you; Mr. Berger too.

[The statement follows:]

STATEMENT OF CHARLES L. EDSON, COUNSEL, NATIONAL LEASED HOUSING ASSOCIATION

My name is Charles L. Edson. I am a member of the Washington law firm of Lane and Edson, P.C. and Counsel to the National Leased Housing Association, on whose behalf I testify today.

Although NLHA has appeared before your Committee for many years, we appear today in a new and broader role. In our early years, we were the advocates for the Section 23 Leased Housing Program, and since 1974, we have been solely involved in fostering a strong and workable Section 8. In recent times, however, we have broadened our concern to all rental housing, especially rental housing in which the government is involved either through assistance or insurance.

This emphasis on rental housing is most timely. In addition to traditional renter groups -- the young, the elderly and the transient -- we now have an ever-increasing group of families who just don't have the funds available to buy their own home. In addition, many others are now choosing to rent instead of buy, as it becomes apparent that home ownership in the 1980s just will not be the miraculous investment is has been in the past decade. Significantly, the General Accounting Office, in its 1982 evaluation of the recommendations of the President's Commission on Housing, questioned whether there is a sufficient stock of rental housing in specific communities for the highly touted voucher system to be workable, and that in tight rental markets the voucher system might be more expensive to the government than a housing production program.

Although the demand for rental housing is at an all time high, its production is at an inadequate level. It is to correct this imbalance, while also focusing on the management and preservation of our existing stock, that NLHA will now be directing its activities.

Our primary purpose here today is to urge this Committee to support an amount of funding for a new rental housing initiative at least equal to the level contained in the Senate Banking, Housing and Urban Affairs committee bill -- $300,000,000. The need for a rental housing production program is clear. Various studies estimate an annual shortfall of multifamily units of between 170,000 and 302,000 units per year. Indeed, one study estimated an annual need of 500,000 rental units. This figure should be compared with the 45,000 rental starts in 1981 that occurred without government subsidy.

The new rental program in the authorization bill would establish a block grant program for local governments to assist new rental construction, with a funding level of $300 million. The initiative would involve an initial subsidy to the developer, which would take the form of an interest rate write down or any other financing mechanism the local government chooses. This type of obligation differs drastically from the federal government's obligation of up to forty years under Section 8.

Accordingly, we urge an appropriation of at least the level of $300 million contained in the banking committee's bill for a new rental construction initiative.

Existing Housing

The National Leased Housing Association also endorses the continuation of the successful Section 8 existing housing program, and we urge this committee to appropriate funding for 50,000 newly assisted housing units as contained in the House HUD-Independent Agencies Appropriations subcommittee bill. NLHA firmly believes that the best way to house lower income Americans in decent, safe and sanitary shelter is to utilize existing stock when possible.

In this regard, we commend the concept of making Section 8 existing contract authority available to HUD to be utilized in those FHA insured projects facing economic difficulty. The infusion of Section 8 assistance into such projects can prevent defaults in many cases. As you are aware, a default means a direct charge on the FHA insurance fund and ultimately the federal Treasury, so the availability of Section 8 under these circumstances is financially prudent.

We also endorse the request set forth in the Administration's budget for contract authority as part of its amendment authority to amend those Section 8 contracts for which the reserves are exhausted. Fortunately, this happens in relatively few cases, but there have been instances in which the project reserve has been exhausted because of the great increase in operating expenses in the late 1970s and the early 1980s. We believe that the Administration's request is within the spirit of Section 8(c)(6) of the United States Housing Act which requires HUD to amend housing assistance contracts to ensure that payments are increased on a timely basis to cover increases in maximum monthly rents or decreases in family incomes.

In summary, the members of the National Leased Housing Association feel that we are endorsing proposals that provide a badly needed enhancement to our rental housing stock and provide additional units for low and moderate income families, while keeping within the budget resolution for FY'84. As you are aware, the current level is vastly reduced from the amount made available for housing in prior years. This end is accomplished by creating a rational housing policy of shallow subsidies to encourage the construction of rental units for moderate income families and the efficient utilization of our existing stock for lower income Americans.

It is always a pleasure for us to appear before the Committee, and we thank you for the opportunity to do so today.

STATEMENT OF JAMES SCHUYLER, STAFF VICE PRESIDENT AND LEGISLATIVE COUNSEL, NATIONAL ASSOCIATION OF HOME BUILDERS

Senator ABDNOR. The next witness is Mr. Schuyler.

Mr. Schuyler is here. Good. I guess you heard me tell Mr. Edson that you may summarize and that your entire statement will be made a part of the record.

Mr. SCHUYLER. Thank you, Mr. Chairman.

I am Jim Schuyler, staff vice president and legislative counsel for the National Association of Home Builders, and I am very pleased to be testifying before you today on behalf of the 110,000 members of our association. We are very pleased that our membership has been going up over the last couple of months. We have appeared before you over years in the past with numbers as low as 107,000, and I guess a couple of years ago with numbers as high as 125,000. We are hoping that we are back on the way up.

Let me first indicate to you that we have had a very strong first quarter in terms of housing production this year; both starts and permits have been way up in most parts of the country. There have been a great number of houses that are being built. Some of them are being speculatively built by builders based on a very bullish attitude our builders have toward the ability to produce affordable housing and sell it this year.

We do believe that the recovery which we are into now should be sustainable through 1983 and into 1984, provided that interest rates stay at their current level and begin to go lower. If that does not occur, then we could have some serious problems in terms of inventory and houses that we have that we may not be able to sell. Our own projections of the production is that it will be up substantially this year, in the range of about 1.5 million houses and up about that level at least through 1983.

There are a number of regional variations that have been occurring in terms of this recovery. There are some areas in the country that have been moving very quickly, areas like Dallas, Houston, Phoenix, and others, both in terms of single-family and in terms of multifamily production.

There are other areas in the country, particularly areas in the Northeast, some in the Midwest, and in the Pacific Northwest, that have been moving along far more slowly. That is largely due to high unemployment rates in those areas of the country and the fact that we really cannot build affordable housing for those people with the incomes they have and the problems they have in maintaining their jobs.

I think what I would like to focus on in terms of the expenditures that we believe are appropriate for fiscal 1984 are in those market areas and with the areas of population which cannot be served by the private sector without some assistance from the Federal Government. What we do indicate in here is that there really are two particular areas where we believe that some assistance is needed. One of them is in the area of multifamily rental production and rehabilitation. As I am sure has been discussed with you earlier today, we feel that with severe rental shortages in many parts of the country, there is a need for a Federal program along the lines of what is now being considered by the Senate and House Banking Committees.

That would be a shallow interest reduction program to assist developers in building multifamily rental housing in those areas where there are severe rental shortages.

We believe that the $300 million which is proposed in the Senate Banking committee's bill this year is really insufficient for a national program, but we do hope that once the process has been completed that we can get a workable program or one that will assist at least 20 percent low-income people, as well as making rental housing available for other people, the working poor and above, who are not able to meet the rentals in their own areas of the country right now.

Another significant area that we feel would be appropriate for continued Federal assistance is in the area of homeownership for lower income families. There we have long supported the section 235 homeownership program. That program was extended in the Senate version of the housing bill this year; the House version of the housing bill does provide rather modest funding for about 6,500 units continuing that program. Our feeling is that there should be a continued Federal commitment to hold open the promise of homeownership for people at the lower end of the income scale. This is a population of 95 percent of median area income and below.

We believe that without some kind of Federal assistance, we don't see the ability of those people to have the promise of homeownership at some time in the future.

The last area which we think is particularly significant is one that we were very pleased to hear the President speak to when he spoke to our board of directors last week at our meeting at the Washington Hilton. He indicated the vital importance of the FHA unsubsidized homeownership program, the FHA insurance program, the proposed, at that time—and I believe as sent to Congress—a request for a $5 million increase in commitment authority for the FHA program for fiscal 1983, based upon the tremendous volume of activity that has been occurring in that program in the last 6 months.

We do urge this committee to act on the appropriation request for fiscal 1983, and we would support a commitment level for FHA at least at the fiscal 1983 levels through fiscal 1984, because we believe the level of production will continue to be high and the need for the FHA program will be very high.

Along with that, we believe that the GNMA mortgage-backed securities program should be provided at a sufficiently high level to support the level of FHA and VA activity. I think those are the main highlights of our testimony. We appreciate the opportunity to be here. We certainly look forward to working with you, your staff, or members of your committee in the future.

Senator ABDNOR. Thank you very kindly, Mr. Schuyler. We certainly have great respect for the views of the National Association of Home Builders, and all of us have worked with your people. I am happy to say that your views are being considered and, hopefully, will be put into being. I see that you support funding for 14,000 units of elderly and handicapped housing; correct?

Mr. SCHUYLER. We do, as well; that is correct. We would indicate in that area—and this is one we have spoken to in the past, and we believe the House version of the housing bill is opening up that program to the for-profit sponsor. We have indicated that that program would be benefited if the for-profit developer, as well as the nonprofit sponsor, were able to compete in that program and see whether we can bring in more affordable housing under the 202 program.

But, as you indicate, we do support the continuation of that program in any case.

Senator ABDNOR. That is good. I have to believe that our chairman intends to recommend that level again for 1984. I am happy to say that the subcommittee does intend to provide that increase of $5 billion in the FHA loan commitment level. I think we are going to be marking up the 1983 appropriations soon.

Mr. SCHUYLER. Very good.

Senator ABDNOR. We will mark it up Thursday, I think. We are happy to have your testimony before we do that, and we appreciate your views. We thank you very much.

Mr. SCHUYLER. Thank you very much, Mr. Chairman.

[The statement follows:]

STATEMENT OF HARRY PRYDE, SEATTLE, WASH.

Mr. Chairman and Members of the Subcommittee:

My name is Harry Pryde and I am a homebuilder and developer from Seattle, Washington. I am testifying on behalf of the more than 110,000 members of the National Association of Home Builders (NAHB). NAHB is a trade association of the nation's homebuilding industry, of which I am President. Accompanying me today are Robert D Bannister, Senior Staff Vice President for Government Affairs and Jim Schuyler, Staff Vice President and Legislative Counsel.

Mr. Chairman, I appreciate the opportunity to present the views of the homebuilding industry on federal expenditures for housing in FY'84.

Before I comment on housing appropriations, I would like to outline for the Subcommittee the state of the housing industry today.

STATUS OF THE HOUSING INDUSTRY

The housing recovery has received much attention recently as one of the bright spots in the economic picture. Builders in some areas of the country tell me that they have sold more homes so far this year than they sold during all of 1982. I believe housing, as it has done traditionally throughout the post World War II period, is leading the nation's economy out of recession and into recovery.

Housing Production

In 1982, the housing industry operated at its lowest levels of production since 1946. Starts in 1982 ended up at 1.07 million, about 47 percent below the peak of the previous cycle in 1978. New home sales were at their lowest level since the Census Bureau began its sales survey in 1963. Based on NAHB's most recent econometric forecast, housing production is expected to increase to 1.55 million units in 1983.

New Home Sales

While 1982 was the worst year for new homes sales since the Census Bureau began collecting statistics, sales of new homes in the first quarter of 1983 are up 55% from the same period one year ago. The March 1983 sales rate of 577,000 was 54% above the rate one year ago and 69% above April 1982, the low point in the cycle. The re-sale market also improved dramatically in March to an annual rate of 2,700,000. Applications for FHA insurance of single family homes have set all time records and remain above the one million annual rate level.

Existing Home Sales

Existing home sales in 1982 were down 18% to 1.99 million from 2.42 million in 1981. It was the lowest year in the resale market since 1970. Sales for March 1983 were up 33.0% from one year ago, up 9.8% from February and down 34% from the November 1978 peak.

Interest Rates

Mortgage interest rates are in the 11.5 percent to 13.5 percent range, substantially higher than rates in 1976, when the housing industry recovered from its last major recession.

Unemployment

Even with the recovery in the housing market, unemployment in the construction trades in April was 20.3%.

MULTIFAMILY HOUSING

Mr. Chairman, affordable rental housing has become a scarce commodity in many areas of the country. The national vacancy rate is less than 5.5 percent, and much less in many large urban markets. Uriel Mannheim, a respected housing economist, projects the demand for new multifamily rental units at 350,000 per year during this decade. The construction level for 1981 and 1982 was between 175,000 and 200,000 units, a shortfall of 150,000 to 175,000 units per year. And about one-third of the units each year were built under Section 8 program, now targeted for extinction. We believe that the rental rehabilitation and development grant program authorized by the Banking Committee represents a modest effort to meet the demand for multifamily rental housing.

We would urge an appropriation of the authorized $300 million, even though we believe this funding level is insufficient for a successful national program. Since the House Banking Committee is considering a different approach to a rental production program, we are hopeful that a workable agreement can be reached on a program to expand the rental stock in areas of need.

NAHB supports the continuation of the Section 202 direct loan rental production program for the elderly and handicapped at a loan limit of $667 million, to assist 14,000 units with the interest rate set at 9-1/4 percent. NAHB believes that the development of Section 202 projects could be made more efficient by opening up development opportunities to profit motivated sponsors whose experience will save valuable time and money.

FHA/GNMA CREDIT PROGRAMS

Mr. Chairman, I will not belabor the issue of the importance of the FHA insurance, VA-guarantee and GNMA mortgage-backed securities programs. Since the creation of FHA in 1934, more than 16 million homes have been purchased with low downpayment mortgages insured by the federal government at no cost to the public. FHA and VA represent the major source of low-downpayment, fixed-rate long-term mortgages available today and throughout the housing cycle. GNMA is essential to provide the capital necessary to finance these loans. We should certainly not turn away from the proven GNMA program in today's environment, while we continue to work to expand the conventional mortgage-backed securities market. As President Reagan suggested before the NAHB Board of Directors on May 16, 1983, there has been a "surge in FHA loan applications. For the last 6 months, an average of 78,000 families applied for FHA mortgages, compared to 23,000 per month last year. That's an increase of more than 200 percent." Therefore, we strongly endorse the FHA commitment authority of at least $45.9 billion and GNMA mortgage-backed securities of $68.25 billion. We would urge that two procedural safequards be provided for these credit programs. First, we would urge that the Secretary of HUD provide prompt notification to Congress whenever it appears that commitments are being utilized at a rate which would pose the possibility of running out of commitment authority by the end of the year. Second, we would urge that anti-impoundment language be included so that limits set by Congress cannot be reduced by administrative directive.

SINGLE FAMILY HOUSING

Mr. Chairman, the HUD Section 235 has long been a vehicle for providing home ownership to lower-income families. Despite the recent surge in single family production, there is no way that the private sector can provide homeownership opportunities for families with incomes as low as 95% of median area income, who would be eligible for assistance under the 235 program. We believe that the federal government must continue its commitment to promote homeownership for families at the lowest end of the market. This proven program has assisted over 100,000 homebuyers since it was revised in 1976.

Mr. Chairman, if an appropriation for the Section 235 homeownership program is provided in the House Appropriations bill, we would request the Senate accept the action of the House.

We further believe that such assistance should be provided for a maximum of 10 year contract term (rather than 30 years). The average 235 homebuyer currently no longer receives assistance after seven years as the family income rises usfficiently to meet the entire monthly payment. As a safeguard, a fund could be set up from recaptured funds to assist those families who continue to be eligible and in need beyond the 10 year term.

NATIONAL INSTITUTE OF BUILDING SCIENCES

The National Institute of Building Sciences (NIBS) has established itself as an important research and information coordinating body for all segments of the building community. During the recent economic downturn, NIBS has been unable to generate sufficient private funding to continue to expand its vital activites. NAHB supports the Banking Committee's authorization of $500,000 for NIBS and urges this Committee to appropriate the same amount.

CONCLUSION

Mr. Chairman, we have long maintained that a consistent and responsible federal role in housing production is money well spent because it produces decent housing, creates jobs and benefits the economy. We ask you to bear that in mind as you review direct federal expenditures for housing this year.

As always, we stand ready to assist the Subcommittee and your highly competent staff as you continue the housing appropriations process. Together, we can reaffirm our nation's long standing commitment to decent and affordable housing for all Americans.

STATEMENT OF JOHN RITCHIE, EXECUTIVE DIRECTOR, VIRGINIA HOUSING DEVELOPMENT AUTHORITY, ON BEHALF OF COUNCIL OF STATE HOUSING AGENCIES

Senator ABDNOR. We got a little ahead of ourselves, Mr. Ritchie. I thought we were pressed for time, but we are doing very well. Not to rush you, but we won't be accused of keeping you away now.

Mr. RITCHIE. Thank you, Senator.

Senator ABDNOR. It is good to have you with us. I have met you many times before, and I know that your entire statement will be made a part of the record. I will just ask you to go ahead and summarize in any fashion you wish.

Mr. RITCHIE. Fine. Thank you very much, Senator. As I am sure you are familiar with, the Council of State Housing Agencies represents actually 49 States now with the approval of the new housing finance agency in the State of Washington, including, in addition, New York City, the District of Columbia, Puerto Rico, and the Virgin Islands, which have provided loans and grants for over a million rental and ownership housing units since the creation of the first housing finance agency in the State of New York in 1960.

As I know you are as familar as any of us here today, by any standard except perhaps the Great Depression, the past 3 years have been exceptionally poor ones for the housing industry. There is a sign of a recovery now, although it may be rather fragile at this time. However, while the recovery may occur, there are still a great number, perhaps millions of hard-working, first-time homebuyers who are priced out of the homeownership market. I think nothing made that more clear, perhaps, than seeing on the television news last night the lines waiting outside the bank in Ohio yesterday for the first opportunity to obtain mortgage revenue bond financing that occurred in that State with their new housing finance agency.

I am sure you are all familiar with the fact that the Council and the National Association of Realtors, the homebuilders, and many other key housing groups have made reauthorization of mortgage revenue bonds our No. 1 legislative priority this year. Of course, you are familiar with the fact that we have now support from more than three-quarters of the Senate and the House for that effort.

There are three basic goals which we at the council are supporting for the housing appropriations process. The first is to preserve the existing stock of low-income rental housing. I know from my days in the Navy that we were always taught, and I think very correctly so, that preventive maintenance was the best dollar that we could spend. I think that same fact applies to housing. Preventive maintenance is the best dollar that can be spent.

The second goal we are supporting is new approaches for the development of affordable housing for low- and moderate-income households. As you know, the section 8 program has resulted in hundreds of thousands of quality low-income housing units. Budgetary constraints, however, mandate that new and more effecient low- and moderate-income housing delivery mechanisms be developed.

Our third goal is to facilitate a strong State role in the delivery of public purpose housing finance and administration We believe that is in harmony with the New Federalism initiative, and we believe that the record that the States have made over the past 15 years in delivering over a million housing units had clearly identified them as an effective delivery system for housing for low- and moderate-income families.

We hope that they will continue to have an opportunity to play that role.

With regard to the recommendations which we would make to this committee, first, with regard to preserving the stock of low-income rental housing, we see two specific issues before Congress this year. The first relates to rent supplement and rental assistance payment amendments for non-FHA insured rental projects.

Of course, most of the States have such noninsured rental projects.

Because of the increases in the cost of maintaining and operating these projects and decreases in the tenant payments as a result of the economic downturn that we have just come through, or are experiencing now, amendments to the Federal grant subsidies are necessary to keep low-income tenants in occupancy and to keep the projects on a sound financial footing.

The administration has chosen to curtail further funding of rent supplements and rental assistance payments for State-financed, noninsured section 236 projects. With respect to the portfolio of insured section 236 projects, the administration will be converting insured rent supplemental and rental assistance payments to section 8.

During the conversion process, we understood HUD will provide amendments for insured units which have not yet been converted. In other words, they are operating on two different tracks. The federally insured projects are getting more assistance. The uninsured projects are not receiving the same treatment or the same assistance.

The problem which they face, very simply, is rents have been increased because of higher operating costs. At that same time, the incomes of the tenants and their ability to pay has gone down, resulting in a combination of vacancies and rental delinquencies in the units.

The result of that, naturally, leads to deterioration of the housing and a lack of funds for the preventative maintenance that is so important to maintain this as housing stock.

We understand HUD's concern about keeping the FHA insurance fund whole, but we believe that ignoring the approximately 32,000 State agency financed units is penny wise and pound foolish.

The supplemental appropriation or statutory direction that HUD funded for insured properties this year would be necessary and proper. We strongly support language in the 1984 House and Senate authorization bills that will insure that non-FHA projects are eligible for amendments in the future.

We request this committee to provide similar statutory direction. In doing so, we urge the committee not to approve the administration's rescission request regarding the rent supplemental and RAP so that funds can be made available to support these amendments under these programs.

The second point we are most interested in is our concern that there is language in the Senate housing authorization bill that will disallow State housing agencies from participation in the flexible subsidies program.

We recognize the fact that the State housing finance agencies projects have the lowest instances of mortgage delinquency of default of any Federal-assisted, low-income housing.

We believe this record of success is not justification for cutting us out of the program.

As you may be aware, funding for the flexible subsidies program comes from excess rental income, from existing 236 projects, including the State agency projects, and the attempt to cut the State agency out of the flexible subsidy is inequitable, therefore, and unwise, we believe, in terms of the preservation of the low-income rental units.

We urge the committee to take whatever actions may be necessary to insure that additional low- and moderate-income units financed by State housing financing agency and assisted under the flexible subsidy program are not lasting.

Finally, with regard to the new production program, we have worked in cooperation with other Washington housing groups to develop a moderate housing proposal which we hope will serve as a useful tool in the compromised framework between the House and the Senate when such a proposal is considered.

We believe with all of these groups that there is a need for a new housing production program, and we encourage this committee to appropriate the necessary funds for such a program.

Finally, with regard to a strong State role, we believe that the new production program to direct supplement RAP amendments and the flexible subsidies for State agencies, all preserve the role of the State agency, then, to level and to deliver public purpose housing services.

The end result, we think, is more and better housing for lower income Americans. So far, State agencies, in coordination with the Federal Government, local government, and the private sector, have provided grants or loans for over 1 million housing units as I mentioned earlier.

With your help, we believe we will be able to continue this record of achievement.

I would be pleased to answer any questions.

Senator ABDNOR. Thank you, Mr. Ritchie, we have you, I guess, in that we are all in a bind of trying to find the dollars. It is not quite like it used to be when we thought we had problems, but had only small deficits.

Now that we have big deficits, everybody is fighting for the dollar. We fight for what we get and speak out loud and clear, and we appreciate your doing so.

The language proposed by the House in the supplemental bill would require 10-percent matching funds from State agencies for the future rent supplemental and RAP amendments.

I guess we are all aware that you are not happy with this arrangement.

Mr. RITCHIE. Yes. We are really not in a position to provide matching funds.

Senator ABDNOR. The only thing I would like to remind you of is that by taking this action, the House has clearly defined the Federal role regarding noninsured, State-aided projects, and I understand there would be nothing in the requirements to do anything.

In fact, some, including OMB and HUD, might say what is being offered is too generous.

Would you care to elaborate on that? I mean, we do have that problem.

Mr. RITCHIE. We recognize the problem. I think that I can best speak to that but just citing the example of one of the 236 projects which we have which is a project that was located in a poor neighborhood because that was where the needs existed for the housing.

Initially, it rented up to a 100-percent occupancy. As our economy in the Richmond area was depressed, a number of the residents of that project found that they were either laid off or their salaries were reduced, and they were not able to meet the rental payment portion of the rent which they were supposed to pay.

In addition, we found that vacancies occurred that we were unable to fill because the rents had to go up to cover the increased operating costs, and the very location of the project meant that it was unable to attract persons who were able to afford those rents.

So that we were, in fact, are to this very day, caught in this very difficult situation of having located a project to fulfill a public purpose and now find that we are unable to get the support to maintain it, and what initially was a very sound housing development may face deterioration and a loss in quality as good housing stock simply because the numbers do not work for it any longer.

It is very difficult, and we think that if, by statute or regulation, we are restricted to only 90-percent support, in effect, that is legislating a deficit into that project. That doesn't seem to make good sense as sound public policy when we all know that it is much less expensive publicly to maintain existing sound stock then it is to be faced with the fact that the problem of either at some later date rehabilitating or building new stock to rephrase it.

I think once we have got the stock there, we certainly ought to put our first priority on the sound maintenance of that stock. That is going to be the best dollar we can spend.

Senator ABDNOR. We appreciate your views and we will just have to see how it works out.

We thank you very, very much.

Mr. RITCHIE. Thank you, sir.

[The statement follows:]

STATEMENT OF JOHN RITCHIE, EXECUTIVE DIRECTOR, VIRGINIA HOUSING DEVELOPMENT AUTHORITY, ON BEHALF OF THE COUNCIL OF STATE HOUSING AGENCIES

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE, THANK YOU VERY MUCH FOR THE OPPORTUNITY TO TESTIFY TODAY. MY NAME IS JOHN RITCHIE AND I AM THE EXECUTIVE DIRECTOR OF THE VIRGINIA HOUSING DEVELOPMENT AUTHORITY. I AM ALSO PRESIDENT OF THE COUNCIL OF STATE HOUSING AGENCIES. TODAY I SPEAK ON BEHALF OF THE COUNCIL. CSHA REPRESENTS STATE HOUSING AGENCIES IN 48 STATES, NEW YORK CITY, THE DISTRICT OF COLUMBIA, PUERTO RICO AND THE VIRGIN ISLANDS. TO DATE, STATE HOUSING AGENCIES HAVE PROVIDED LOANS AND GRANTS FOR OVER ONE MILLION RENTAL AND OWNERSHIP HOUSING UNITS FOR LOW AND MODERATE INCOME HOUSEHOLDS.

THE CHANGING CONTEXT FOR HOUSING

BY ANY STANDARD EXCEPT, PERHAPS, THE GREAT DEPRESSION, THE PAST THREE YEARS HAVE BEEN EXCEPTIONALLY POOR ONES FOR THE HOUSING INDUSTRY. AT LAST, THERE ARE SIGNS THAT THE HOUSING CRUNCH HAS BOTTOMED OUT AND A DEFINITE, ALTHOUGH FRAGILE, REBOUND HAS BEGUN.

THE RECOVERY OF THE HOUSING INDUSTRY IS WONDERFUL NEWS. AS THE SAYING GOES, IT HAS BEEN A LONG, DRY SEASON. HOWEVER WIDELY THE BENEFITS OF THE HOUSING RECOVERY WILL BE FELT, THERE STILL ARE MILLIONS OF HARD-WORKING FIRST-TIME HOMEBUYERS PRICED OUT OF THE HOMEOWNERSHIP MARKET. STILL MORE MILLIONS OF LOW INCOME FAMILIES CONTINUE TO PAY A DISPROPORTIONATE SHARE OF THEIR INCOME FOR INADEQUATE RENTAL HOUSING. WHILE MIDDLE AND UPPER INCOME AMERICANS BENEFIT FROM LOWER INTEREST RATES, WE MUST NOT IGNORE THE NEEDS OF THOSE WHO BORE THE BRUNT OF THE ECONOMIC CONTRACTION THAT LED TO LOWER INTEREST RATES.

AS YOU MAY BE AWARE MR. CHAIRMAN, THE COUNCIL OF STATE HOUSING AGENCIES, THE NATIONAL ASSOCIATION OF REALTORS, THE HOMEBUILDERS AND MANY OTHER KEY HOUSING GROUPS HAVE MADE THE REAUTHORIZATION OF MORTGAGE REVENUE BONDS A NUMBER ONE LEGISLATIVE PRIORITY. TODAY, S. 137 THE ROTH-MITCHELL BILL TO REAUTHORIZE MORTGAGE BONDS, HAS OVER

77 CO-SPONSORS. A SIMILAR BILL IN THE HOUSE HAS OVER 295 CO-SPONSORS. WE WOULD ENCOURAGE YOU TO LEND YOUR SUPPORT TO THIS CRITICAL PIECE OF LEGISLATION.

GOALS

CSHA IS PROMOTING THREE BASIC GOALS FOR THE HOUSING APPROPRIATIONS PROCESS:

- O PRESERVE THE EXISTING STOCK OF LOW INCOME RENTAL HOUSING. HOUSING ALREADY IN THE ASSISTED HOUSING PORTFOLIO SHOULD BE MAINTAINED. THIS IS GENERALLY THE MOST COST EFFICIENT METHOD OF PROVIDING LOW INCOME HOUSING.

- O PROMOTE NEW APPROACHES FOR THE DEVELOPMENT OF AFFORDABLE HOUSING FOR LOW AND MODERATE INCOME HOUSEHOLDS. THE SECTION 8 PROGRAM HAS RESULTED IN HUNDREDS OF THOUSANDS OF QUALITY LOW INCOME HOUSING UNITS WHICH WILL BE IN SERVICE FOR DECADES TO COME. BUDGETARY CONSTRAINTS, HOWEVER, MANDATE THAT NEW AND MORE EFFICIENT LOW AND MODERATE INCOME HOUSING DELIVERY MECHANISMS BE DEVELOPED.

- O FACILITATE A STRONG STATE ROLE IN THE DELIVERY OF PUBLIC PURPOSE HOUSING FINANCING AND ADMINISTRATION. OVER THE PAST FIFTEEN YEARS, STATE HOUSING AGENCIES HAVE PROVEN THEIR CAPACITY TO EFFECTIVELY MEET HOUSING NEEDS IN THEIR RESPECTIVE STATES BY TAILORING FEDERAL AND STATE PROGRAMS TO MEET STATE-SPECIFIC NEEDS. THIS PROVEN DELIVERY SYSTEM SHOULD BE A PART OF ANY NEW FEDERAL HOUSING PROGRAM.

RECOMMENDATIONS

PRESERVING THE STOCK OF LOW INCOME RENTAL HOUSING

THERE ARE TWO SPECIFIC ISSUES BEFORE CONGRESS THIS YEAR THAT BEAR

ON THE PRESERVATION OF THE EXISTING STOCK OF LOW INCOME RENTAL HOUSING FINANCED BY STATE HOUSING FINANCE AGENCIES.

THE FIRST RELATES TO RENT SUPPLEMENT AND RENTAL ASSISTANCE PAYMENT AMENDMENTS FOR NON-FHA INSURED RENTAL PROJECTS. BECAUSE OF INCREASES IN THE COST OF MAINTAINING AND OPERATING THESE PROJECTS AND DECREASES IN TENANT RENTS, AMENDMENTS TO THE FEDERAL RENT SUBSIDIES ARE NECESSARY TO KEEP LOW INCOME TENANTS IN OCCUPANCY, AND TO KEEP THE PROJECTS ON A SOUND FINANCIAL FOOTING. THE ADMINISTRATION HAS CHOSEN TO CURTAIL FUTURE FUNDING OF RENT SUPPLEMENT AND RENTAL ASSISTANCE PAYMENTS AMENDMENTS FOR STATE FINANCED NON-INSURED SECTION 236 PROJECTS. WITH RESPECT TO THE PORTFOLIO OF INSURED SECTION 236 PROJECTS THE ADMINISTRATION WILL BE CONVERTING INSURED RENT SUPPLEMENT AND RENTAL ASSISTANCE PAYMENTS TO SECTION 8. DURING THE CONVERSION PROCESS WE UNDERSTAND HUD WILL PROVIDE AMENDMENTS TO INSURED UNITS WHICH ARE YET TO BE CONVERTED.

WE CAN UNDERSTAND HUD'S CONCERN ABOUT KEEPING THE FHA INSURANCE FUND WHOLE, HOWEVER, IGNORING APPROXIMATELY 32,000 STATE AGENCY FINANCED UNITS IS PENNY WISE AND POUND FOOLISH. A SUPPLEMENTAL APPROPRIATION OR STATUTORY DIRECTION THAT HUD FUND AMENDMENTS FOR UNINSURED PROJECTS THIS YEAR IS NECESSARY AND PROPER.

CSHA STRONGLY SUPPORTS LANGUAGE IN BOTH THE 1984 HOUSE AND SENATE HOUSING AUTHORIZATION BILLS THAT WILL ENSURE THAT NON-FHA PROJECTS ARE ELIGIBLE FOR AMENDMENTS IN THE FUTURE, AND REQUESTS THIS COMMITTEE TO PROVIDE SIMILAR STATUTORY DIRECTION AND FUNDING. IN DOING SO WE URGE THE COMMITTEE TO NOT APPROVE THE ADMINISTRATION'S RECESSION REQUEST REGARDING RENT SUPPLEMENT AND RAP SO THAT FUNDS CAN BE MADE AVAILABLE TO SUPPORT NECESSARY AMENDMENTS UNDER THESE PROGRAMS.

WE ARE OF THE OPINION THAT THE HOUSE APPROPRIATIONS COMMITTEE ACTED IN A POSITIVE MANNER ON THIS ISSUE BY PROVIDING FUNDS NECESSARY FOR 90% OF THE AMENDMENT COSTS OF STATE FINANCED PROJECTS. HOWEVER, WE WOULD URGE THIS COMMITTEE TO CONSIDER THE DIFFICULTIES STATE AGENCIES WOULD HAVE IN ADMINISTERING PROJECTS WITH LESS THAN 100% OF

WHAT IS REQUIRED TO MAINTAIN UNITS FOR LOW INCOME OCCUPANCY WITH FUNDING SHORTFALLS AUTOMATICALLY BUILT INTO THE PROCESS. SUCH A POLICY PLACES THE PROJECTS AND THE LOW INCOME TENANTS THAT OCCUPY THEM AT RISK.

SECONDLY, WE ARE DISTURBED TO FIND LANGUAGE IN THE SENATE HOUSING AUTHORIZATION BILL THAT WILL DISALLOW STATE HOUSING AGENCIES FROM PARTICIPATING IN THE FLEXIBLE SUBSIDIES PROGRAM. WE ACKNOWLEDGE THAT STATE HFA PROJECTS HAVE THE LOWEST INSTANCES OF MORTGAGE DELINQUENCY AND DEFAULT OF ANY FEDERALLY ASSISTED LOW INCOME HOUSING. HOWEVER, THIS RECORD OF SUCCESS IS NO JUSTIFICATION FOR CUTTING US OUT OF THE PROGRAM ENTIRELY. AS YOU MAY BE AWARE, FUNDING FOR THE FLEXIBLE SUBSIDIES PROGRAM COMES FROM EXCESS RENTAL INCOME FROM EXISTING SECTION 236 PROJECTS INCLUDING STATE AGENCY PROJECTS. THIS ATTEMPT TO CUT STATE AGENCY PROJECTS OUT OF FLEXIBLE SUBSIDIES IS INEQUITABLE AND UNWISE IN TERMS OF THE PRESERVATION OF EXISTING LOW INCOME RENTAL UNITS. WE URGE THIS COMMITTEE TO TAKE WHATEVER ACTIONS MAY BE NECESSARY TO ENSURE THAT ADDITIONAL LOW AND MODERATE INCOME UNITS FINANCED BY STATE HOUSING AGENCIES AND ASSISTED UNDER THE FLEXIBLE SUBSIDIES PROGRAM ARE NOT LOST.

NEW PRODUCTION PROGRAM

CSHA, IN COOPERATION WITH OTHER WASHINGTON HOUSING GROUPS, HAS DEVELOPED A MODEL HOUSING PROGRAM PROPOSAL THAT IS CONSISTENT WITH THE GENERAL CHARACTERISTICS OF THE HOUSE AND SENATE HOUSING BILLS. IT IS OUR HOPE THAT THIS PROPOSAL WILL SERVE AS A COMPROMISE FRAMEWORK BETWEEN THE HOUSE AND SENATE. CSHA, ALONG WITH MANY OTHER INTERESTED HOUSING GROUPS BELIEVE THERE IS A NEED FOR A NEW HOUSING PRODUCTION PROGRAM. WE ENCOURAGE THIS COMMITTEE TO APPROPRIATE NECESSARY FUNDS FOR THIS NEW PRODUCTION PROGAM. DETAILS OF THIS PROGRAM ARE ATTACHED TO THE TESTIMONY.

A STRONG STATE ROLE

THE NEW PRODUCTION PROGRAM, THE RENT SUPPLEMENT/RAP AMENDMENTS, AND THE FLEXIBLE SUBSIDIES FUNDING FOR STATE AGENCIES ALL SERVE TO PRESERVE THE ROLE OF STATE AGENCIES IN THE DELIVERY OF PUBLIC PURPOSE HOUSING SERVICES. THE END RESULT IS MORE AND BETTER HOUSING FOR LOW AND MODERATE INCOME AMERICANS. SO FAR, STATE AGENCIES, IN COORDINATION WITH THE FEDERAL GOVERNMENT, LOCAL GOVERNMENT AND THE PRIVATE SECTOR, HAVE PROVIDED GRANTS OR LOANS FOR OVER ONE MILLION HOUSING UNITS. WITH YOUR HELP WE SHOULD BE ABLE TO CONTINUE THIS RECORD OF ACHIEVEMENT.

I WOULD BE PLEASED TO ANSWER ANY QUESTIONS YOU MAY HAVE.

Rent Supplement and Rental Assistance Payments

Section 101 of the Housing and Urban Development Act of 1965 and Section 236 of the National Housing Act make specific provisions for assistance to low income tenants under the Rent Supplement Program and the Rental Assistance Payments (RAP) program. These subsidies are provided in amounts equal to an approved rental charge of 30% of the tenants monthly income.

Periodically, contracts which have been executed under the Rent Supplement and Rental Assistance Payments programs have been amended to reflect increases in maximum monthly rents or decreases in qualified tenants incomes. Until now, these amendments have been executed without regard as to whether the housing covered by such contracts have been subject to a mortgage insured under the National Housing Act.

The Council of State Housing Agencies is now aware and vehemently opposes efforts on the part of HUD to terminate the funding of necessary amendments to existing Rent Supplement and Rental Assistance Payments contracts financed by State Housing Finance Agencies without FHA insurance. The Department's proposed action creates an artificial distinction between projects which were insured by FHA and those which were not and will place projects financed by bond proceeds at risk. Further, the Department's inequitable distinction between insured and non-insured projects will ultimately force qualified tenants to vacate units where necessary rent increases occasioned by increased operating and maintenance costs are required.

The Department's intention to terminate the funding of amendments in light of the Secretary's obligation found in the statutes for both programs, and, in light of the expressed intent of the Congress reflected in the last December's continuing resolution, is noted in the Department's 1984 budget which acts to rescind rent supplement and rental assistance payment subsidies which should be utilized to provide needed amendments. This must not be allowed to occur if indeed state agencies are to be able to continue to preserve the existing stock of low income housing and avoid placing approximately 32,000 state financed units assisted under Rent Supplement and RAP at risk.

SUMMARY OF PROPOSED MULTIFAMILY HOUSING PRODUCTION PROGRAM
as developed by an informal coalition of interested nongovernmental groups

The proposal would provide $1.3 billion for the production and major rehabilitation of multifamily rental or cooperative housing. There would be a three-part allocation of funds: 50% to entitlement cities or urban counties; 25% to states; and 25% to be administered directly by HUD. Distribution to states and cities would be on a needs-based formula. State and HUD funds would be used in both metropolitan and nonmetropolitan areas. Projects would be competitively selected. At least 20% of the units in each project must be reserved for occupancy by low-income households and at least 70% of the total funds allocated to any entitlement city, state, or to HUD must be used to produce units which would be occupied by households with incomes below 80% of median. [This 70% could be reduced to 50% if HUD determines the higher figure would not serve the purposes of the program.] Section 8 existing certificates would be set aside for use with these units.

Funds may be used only for construction or rehabilitation of vacant units (or to prevent imminent removal of units). Assistance may be in the form of a loan, repayable on any terms acceptable to the locality or state, or a grant, but priority in project selection would go to projects providing for repayment. Repayments would be made to the agency administering the program and must be used "for purposes consistent with the act." No conversions would be permitted for at least ten years. Davis-Bacon restrictions would apply to projects of 20 or more units. No program funds may be used for administration. Fair housing, environmental protection and minority business participation requirements must be followed.

An entitlement city or state designates the program administrator, and may designate a state or local agency or HUD. The agency submits an application to HUD identifying local needs and programming the funds in a manner designed to meet them. HUD may disapprove the application within 45 days only if it is demonstrably unrelated to the area's housing needs, inconsistent with its community development plans, or does not provide a project selection method that is compatible with the statute. States may do their own project selection or pass through funds to eligible cities. Project proposals are submitted to states, cities, or HUD by private nonprofit or for-profit developers or public agencies.

The following criteria, which may be weighted by administering agencies to meet specified housing and community needs, would apply to project selection: (1) consistency with applicable community and housing development plans; (2) consistency with the locality's housing needs; (3) extent of leverage of other funds; (4) project design and location appropriate for needs of the surrounding neighborhood; (5) development and management experience and capacity of the applicant; (6) operating efficiency, including energy conservation; and (7) such other criteria as may promote the objectives of the program.

STATEMENT OF MELVIN J. ADAMS, VICE PRESIDENT FOR HOUSING, NATIONAL ASSOCIATION OF HOUSING AND REDEVELOPMENT OFFICIALS

Senator ABDNOR. I may jump around a little bit from our schedule, but Mr. Adams has come in and we will take him ahead of schedule, if he doesn't mind.

I will ask Mr. Adams to come forward, vice president for housing, National Association of Housing and Redevelopment Officials.

I hope you don't mind coming up early.

Mr. ADAMS. No, because I will be able to catch a 4:45 plane. If I lived in your State, I would vote for you.

Senator ABDNOR. You have sold me. I will try not to keep you very long.

Mr. ADAMS. I will introduce the full statement in the record and summarize a short one.

Senator ABDNOR. We will get along fine. You may summarize, and I assume you your entire statement will be made a part of the record.

Mr. ADAMS. NAHRO appreciates the opportunity to testify. We think that especially the Senate committee has been extremely helpful to the industry in keeping it solvent and properly funded.

However, we do feel that over the years, in the last few years, the cuts that housing and community development have suffered have been disproportionate in terms of the size of the program, and we hope that this year these deep cuts will be stopped and we will once again begin to get adequate money to operate.

Community development and UDAG have been two very successful programs. An important part of those programs is the section 312 loan, the rehabilitation section 108. We think those two should continue. We would like to see UDAG funded at a level of $440 million and community development at $4.4 billion.

One of the problems with community development over the years is that as more communities get eligible, the activities that can be funded get increased; the dollars have not increased. So with inflation and more eligibility, we have less money to operate; even at the same level that, in effect, is a cut.

We believe that the section 8 existing housing program and the section 8 moderate rehabilitation program should continue to be funded as they are without any major changes.

One of the problems of any housing program is it takes a few years to get it working, to get the industry to understand it.

That is particularly true of section 8, moderate rehabilitation. It is not being understood; interest rates are more favorable. It is something that works; let's continue with it.

Instead of coming up with something that is entirely new that might take 2 or 3 years to fund, the need for housing is now, and we would not be in favor of changing those programs.

In terms of existing public housing, through the years we have felt that keeping them solvent fiscally and in physically sound condition should be the No. 1 housing priority. It does not make sense to take a good asset that exists that may need some renovation and to let it dissipate.

We believe that this year the operating subsidy needs $41.5 billion. We would hope that that would be the level of appropriations.

On the other hand, we realize that just asking for more money is an easy thing to do, but that isn't the whole answer to the problem.

The industry is very concerned about the quality of the management of public housing and about the need to develop standards. It is our intent, irrespective of whether the authorizing legislation sets up a commission to develop standards, we want to develop some standards that can be applied to housing authorities, to performance that may differ by region, by size of the program, and for other purposes. But we need some standards to measure, objective standards to measure the program.

Modernization under the comprehensive improvements assistance program is an extremely important part of the total public housing program. We would like to see the appropriation at the same level as it is this year—$2.5 billion. To give you an example, in Dade County we have received under CIAP modernization in the laws 3 or 4 years, almost $16 million.

By the end of this fiscal year, $15 million of that will be under construction or completed. We need a flow of funds so that we don't have lapse.

Finally, housing production: We support $1.3 billion for housing production in the private sector for low- and moderate-income families, and we think that public housing needs to be funded at a 10,000-unit level.

There has been concern by the Appropriations Committees in both Houses that there were a lot of units in the pipeline that should be cleaned out before new housing funds are appropriated.

Again, I will speak for Dade County; we have about 800 units that are not under construction. By the end of 1984, they will all be under construction. It takes anywhere from 24 to 36 months from the time of the appropriation of a public housing fund until the start of construction.

There is going to be a gap irrespective of whether or not the money is appropriated in this budget, but the gap should be short. We have 30,000 families on our waiting list. If somebody comes in today, we tell them, "You have a 20-year wait, because all we can do is offer it internally."

We say that knowing that some of the elderly will not be with us when their name gets to the top of the list. That is the summary of our position. We would be happy to answer any questions that the committee might have.

Senator ABDNOR. Thank you, very kindly, Mr. Adams, for a very concise report. We hope we can earnestly do some of the things you propose here.

I see that you are supporting the fiscal year 1984 funding levels for CIAP of $2.5 billion. That is a lot.

Mr. ADAMS. Yes, sir.

Senator ABDNOR. This is $1.1 billion above the request. At the same time, you note that the goal of bringing all public housing units to an acceptable standard is still elusive.

Based on our hearings with the Secretary a few weeks ago and our chairman, I think, allow me to say, that the modernization goals are underdesigned and our program to date is unknown.

We appreciate your continuing efforts to assist the subcommittee in defining these goals and establishing the funding levels. It requires a lot of consideration. Just as another note, I think you say the outlay estimates for HUD during fiscal 1984 is $14.3 billion rather than $13 billion.

What I am trying to say is you said it was $13.7 billion. I think it is $14.3 billion. This is due to the outlay effects of that so-called jobs bill that we passed.

Remember that?

Mr. ADAMS. Yes.

Senator ABDNOR. That will change, but we have a lot of work before us here to get this all squared away.

I am going to let you catch that plane.

Thank you, very much, for your appearance today.

Mr. ADAMS. Thank you, very much.

[The statement follows:]

STATEMENT OF MELVIN J. ADAMS, VICE PRESIDENT FOR HOUSING, NATIONAL ASSOCIATION OF HOUSING AND REDEVELOPMENT OFFICIALS

Mr. Chairman and members of the Subcommittee, I am Melvin J. Adams, NAHRO's Vice-President for Housing, and Director of the Dade County, Florida Department of Housing and Urban Development.

NAHRO, as you know, is a 49-year old association of professionals who administer low-income housing, rehabilitation, and community development programs in localities across the country. We represent over 5,000 individuals and 2,000 agencies involved in carrying out these programs. I appreciate the opportunity to appear before you today to comment on fiscal year 1984 appropriations for housing and community development programs.

Mr. Chairman, my statement will be divided into five areas. No priority should be inferred from their order.

- First, I would like to present NAHRO's general reaction to the Administration's fiscal year 1984 funding proposals for housing and community development.
- Second, I would like to comment specifically on proposals for funding the Community Development Block Grant, the Urban Development Action Grant, and other community development programs.
- Third, I would like to state NAHRO's view on the case for adequate funding for the Section 8 existing and moderate rehabilitation programs.
- Fourth, I would like to call the Committee's attention to the need to provide adequate operating subsidies and modernization funds to preserve the existing public housing stock.
- Fifth, I would like to address the need for new public housing production and a program of multifamily housing production.

Before commenting on fiscal year 1984 appropriations levels, I would like to commend this Subcommittee for its action on FY83 appropriations bills, including your action with regard to proposed deterrals of assisted housing and UDAG funds.

I. THE ADMINISTRATION'S FY84 FUNDING PROPOSALS

NAHRO believes that the drastic and disproportionate cuts made in housing and community development programs over the last few years has brought them to the brink of destruction. The national goals of "a decent home and a suitable living environment for every American family," proudly proclaimed in the Housing Act of 1949, are becoming empty words. Thanks in part to the support of this Subcommittee, many programs have been kept alive, but many only barely. NAHRO believes that fiscal year 1984 is the time to reverse the destructive trend of the last few years, and redeem the national commitment.

Our Association has carefully analyzed the proposed HUD budget for fiscal year 1984, and has specific recommendations to make. In presenting these recommendations, NAHRO would like to emphasize that the program area most seriously damaged by cutbacks since 1980 has been HUD-assisted housing - a 70 percent reduction in gross budget authority over 5 years. This has been accomplished by the virtual elimination of any federal assistance for construction/substantial rehabilitation of lower income housing, and by the 1984 Administration proposal to further curtail the level of support for existing housing. NAHRO's policy supports restoration of funding for new construction/substantial rehabilitation of assisted housing and favors retention of the proven system of Section 8 existing housing, including moderate rehabilitation.

The Administration's 1984 HUD budget would continue the dismantling of all of the Department's programs for new construction of assisted housing for lower income families. It holds at current levels the budget for HUD's Community Development Block Grant (CDBG) and Urban Development Action Grant (UDAG) programs. It repeals the Section 312 loan program; it eliminates Section 108 loan guarantee authority even though this does not require budget authority.

For FY1984, the Administration proposals include:

- A 61 percent reduction in the use of budget authority for the Department of HUD over FY1983.
- Elimination of new construction/substantial rehabilitation of assisted housing, except for Section 202 elderly.
- A hold-the-line dollar level of budget authority for CDBG and UDAG. A proposal to combine CDBG with general revenue sharing.
- An increase of 16 percent in budget authority for new reservations in existing housing, but at a reduced and restricted level of assistance.
- A proposed recission of $2.8 billion in recaptured authority from rent supplements and section 236.
- A de-obligation of 57,754 Section 8 and public housing assisted housing units under reservation waiting for construction.
- A new system of operating assistance in public housing, moving away from a cost-based system, and phase out of the CIAP.
- Proposed legislation to target and reduce the role of the Federal Housing Administration (FHA).
- A reduction of 1,138 full-time employees (9%) in the Department of HUD; a reduction of 2,037 employees or 15 percent over FY 1982.

Overall, in the Administration's budget, total Federal Government outlays for FY 1984 are projected at $848.5 billion, up 10.4 percent from FY 1983. The outlays for the Department of Defense projected at $238.6 billion, up 14.2 percent from FY 1983. In contrast, outlays for the Department of HUD fall from $14.8 billion in FY 1983 to $13.7 billion in FY 1984 - a decline of 8 percent - and after inflation, a decline of 12 percent.

Programs specifically proposed for termination in FY1984 include:

- Section 108 Loan Guarantees (CDBG)
- Section 312 Rehabilitation Loans
- Section 8 Existing
- Moderate Rehabilitation Program (Section 8)
- Solar Energy and Conservation Bank
- New Community Development Corporation
- GNMA Special Assistance Program
- GNMA Emergency Mortgage Purchase Assistance Fund

Also, no new appropriations are requested in FY 1984 for:

- Troubled Projects (Flexible Subsidy) - FHA
- Congregate Service Program
- Non-Profit Sponsor Assistance
- Housing Counseling Assistance
- Section 8 New Construction
- Public Housing New Construction

II. COMMUNITY DEVELOPMENT

Mr. Chairman, NAHRO strongly supports funding the Community Development Block Grant and UDAG programs at the fully authorized level for FY 1984. After eight years, the CDBG program has demonstrated its value in helping communities meet their preservation and development needs. Except for the action of the Congress on the FY 1983 supplemental appropriations/jobs bill, funding levels for CDBG have not increased since 1980, while the scope of eligible activities has broadened. Regular funding in fiscal year 1983 remains at $3.45 billion, the same level of funding as in FY 1982 and less than the $3.81 billion level in 1981, $3.9 billion in 1980, and $3.75 billion in 1979. The value of the appropriation in constant dollars has declined yearly since 1978, with current funding significantly lower in real terms than in 1975.

NAHRO supports an appropriation for the CDBG program of at least $4.4 billion for FY 1984, higher if the authorizing committees will approve it. $4.4 billion is a funding level which minimally reflects inflation, but does not reflect increased eligible activities and the continuing addition of new entitlement communities. We oppose adding new housing construction as a CDBG activity.

Also, NAHRO supports the fully authorized level of appropriations for UDAG which, since its inception, has achieved an impressive record of leveraging private investment. Action grant projects that received approval during fiscal year 1982 (313 grants for a total of $337 million) leveraged over $2.0 billion in private investment. Over 54,000 jobs were created or retained by these approved projects. Of these jobs, 44,000 are new permanent jobs created at an average cost of $7,650 per new job. Local governments will receive a net increase of $35 million in tax revenues from the 1982 approved UDAG projects.

NAHRO urges the Congress to continue the Section 312 program, and to appropriate the full amount of any newly authorized additional funding for FY1984 to augment the carryover balances available. Lastly, we urge continuation of the Section 108 loan program.

III. ASSISTED HOUSING

Section 8 Existing Program

NAHRO strongly supports adequate funding levels for the successful Section 8 existing and Section 8 moderate rehabilitation programs. Funding which would provide sufficient budget authority for a 15-year term should be provided at least at the 1983 level of $3,755 per unit and $4,800 per unit respectively. These levels continue the policy of providing a reserve fund for use over the life of the certificate. Historically, the Section 8 program has been funded by reserving Budget Authority up to the jurisdictions' published FMR, with no assumed tenant contribution. Thus as a result, the funds not drawn down due to the tenant contribution have allowed PHAs to build a project reserve which has been used to make adjustments to the assistance level needed because of increases in tenant rents or decreases in family income over time.

NAHRO feels that the Administration's proposed funding levels are inadequate to allow the successful continuation of a program which has proven to be useful in providing housing opportunities to low-income persons.

IV. FUNDING FOR PUBLIC HOUSING OPERATIONS AND MODERNIZATION

1) Public Housing Operations

Effectively and efficiently managing the valuable national asset which is the existing public housing stock is the major priority of those of us involved in public housing. Funding of public housing operating subsidies at the $1.5 billion level recently approved by the Banking Committee is essential to help us do that job.

In support of this goal, NAHRO has offered a set of recommendations on improving the Performance Funding System and public housing management. NAHRO's recommendations include reviews and potential updating of the base year calculation, replacement of the so-called "Delta Factor," a simpler adjustment for changes in operating conditions, year-end reconciliation of the allowable expense levels, and the establishment of management goals and incentives at the local level. These proposed changes in the Performance Funding System formula are outlined in detail in a paper NAHRO has prepared. If implemented, they will go a long way toward correcting the inefficiencies and inequities of the Performance Funding System as it now operates.

NAHRO feels strongly that incentives must be built into the Performance Funding System with two different, although related, objectives in mind. One objective is to make more efficient the operation of public housing authorities. The other is to produce savings in operating subsidies.

NAHRO has, consonant with its commitment to improve the quality of performance in public housing, made great strides in training personnel in housing management and rehabilitation. We are now turning our attention to the development of standards by which the operations of public housing agencies can be measured. It is our intention to develop standards which are rooted in the best experience of the public housing industry. We acknowledge that this is a belated step but assure you that the product will benefit the public housing program and assuage your concerns about the quality of public housing management and cost of operations.

2) Public Housing Modernization

Mr. Chairman, we would like to express our appreciation for the $2.5 billion appropriated in FY 1983 for the Comprehensive Improvement Assistance Program. NAHRO continues to feel very strongly that the CIAP is an effective program both for bringing substandard public housing units back into use, and for increasing the useful life, efficiency, and cost effectiveness of currently occupied units and projects. Concerned as we are about preserving the $75 billion national public housing stock, we have asked the Banking Committees to authorize the CIAP for the next three years to insure the continuation of this well conceived program.

Knowing that you share our concerns, we are anxious to reiterate the long-term need for modernization and to continue to work with HUD to put CIAP funds to work. While it is unfortunate that the 1983 CIAP funds were released to the field so late in the fiscal year, we would like to assure you that we are working with our members and with HUD, through our national committee and regional network, to insure that any program problems are quickly identified and effectively addressed. We feel confident that outstanding funds will be quickly and effectively used by PHAs to create jobs and rehabilitate the national investment in public housing.

Despite the significant increase in funding last year, the need for CIAP funding is still great. The goal of bringing all public housing units to an acceptable standard is still elusive. NAHRO supports FY84 funding at the $2.5 billion level as necessary to retain the momentum gained during the past year and accomplish the job that needs to be done. CIAP is a needed program, a workable program and a successful program which needs continued support from the Congress. With that support, units will be rehabilitated, energy improvements will be made, and more people will be housed in public housing.

V. MULTIFAMILY RENTAL HOUSING PRODUCTION AND PUBLIC HOUSING DEVELOPMENT

A) Multifamily Production

NAHRO is pleased at the Administration's recognition of the need to help preserve the nation's rental housing stock in low- and moderate-income neighborhoods. We have existing, workable programs for rehabilitation whose major drawback these days has been underfunding and high interest rates. New rental construction initiatives should be a much higher priority on the housing agenda. New funding should be provided for production of additional housing units.

NAHRO strongly supports the $1.3 billion program approved recently by the House Banking Committee for multifamily housing production. Both last year and this, committees in both houses of Congress have put forward proposals to sustain and assist the supply of rental housing. NAHRO and other housing groups have also developed a proposal along these lines. It is our hope that the House of Representatives and the Senate will enact a multifamily rental housing program this session. If the broadly supported proposals from the industry can assist in assuring such a program, we believe our efforts will have made a significant contribution to the public welfare and the economy. We urge the Committee to appropriate sufficient funds to support a new multifamily rental production program.

B) Public Housing Production

We appreciate the action taken by the 97th Congress last year in the Continuing Resolution, calling upon the Administration to take immediate action to move potential new public housing units in the pipeline into construction. We urge the Committee to continue to press HUD to expedite the development process by removing unnecessary federal requirements and reviews, expanding HUD field office processing capabilities, and stimulating the development capacity of local public housing authorities.

We urge the Congress to continue the federal commitment to providing decent, safe and sanitary housing for low-income Americans. We believe the public housing program is still the best means to achieve that goal.

Therefore, we ask the Subcommittee to fund new public housing production at a minimum level of 10,000 units for FY 1984. This will get production moving again, targeting it to communities with tight housing markets or declining rental housing inventories.

In calling for new public housing production, we are asking the Subcommittee to face the reality of the housing crisis for those at the lower end of the income scale. Theirs is not a problem of merely "scaling-down" housing expectations, but a problem of finding any decent, suitable, affordable housing at all. In many local communities, there is no substantial supply of rental housing and there is intense competition for the limited number of standard vacant units, pushing up rent levels. At the same time, many of these communities are losing rental housing units that could be occupied by low-income households, but require major rehabilitation.

Even before the impact of the recession, virtually all public housing authorities had long waiting lists of eligible households seeking access to public housing. Today those long waiting lists are even longer. In many communities, households seeking public housing face waits of 10 to 20 years given present turn-over rates.

There is also an increasing need for low-rent, special-purpose housing that must be accompanied by support services. This includes housing for low-income frail elderly, handicapped, and female-headed households with children.

These are the realities that prompted the Board of Governors of NAHRO to call for new public housing production (new construction, acquisition, rehabilitation) to begin at a minimal level in fiscal year 1984, to be followed by additional authorizations and funding in subsequent years.

Mr. Chairman, NAHRO members support continuation of the federal comitment to housing and community development. We believe these programs do work if adequately funded. With your support and funding at the levels we have requested, communities will be able to improve their neighborhoods and provide better housing for their people.

STATEMENT OF CARL COAN, LEGISLATIVE COUNSEL, NATIONAL HOUSING CONFERENCE

Senator ABDNOR. Is Mr. Hyde in the room?

Mr. COAN. Senator, I am Carl Coan. Mr. Hyde has a place in the mountains and went up last weekend to clear out the underbrush and caught poison ivy..

I am legislative counsel to the National Housing Conference.

If I may, I would ask the subcommittee's permission to appear on behalf of Mr. Hyde. I wasn't sure until very shortly ago whether he was going to be able to make it. He had intended to but——

Senator ABDNOR. Tell him we don't envy him. I am glad it is him and not me, because that is an unusual thing to have, and I am sorry to hear it.

Mr. COAN. I would like very much to have Mr. Hyde here, because Mr. Hyde can speak with much more authority than I. He is the former vice president, as the statement says, of the U.S. Conference of Mayors, and was and an Undersecretary of HUD during the initial administration, but in the first part and in the second part of the administration.

I would like to hit some of the highlights of his statement if I might on behalf of the National Housing Conference.

The National Housing Conference for over 50 years has recommended and supported policies to encourage an adequate Federal response to many housing and community development problems that have faced us over the years.

We believe that the Nation should be proud of the progress made, but, as a Nation, we have not yet reached the point where we coast on past efforts. Unfortunately, over the past 2 years, we have seen the elimination of some of the major rental assistance renovation programs for lower income families, the section 8 program.

The suspension of public housing production, a substantial cut in housing for the elderly and handicapped, and the apparent end of the GNMA tender program which supported much of the section 8 housing that was constructed over the last several years, a reduced section 8 existing and moderate rehabilitation program, and a substantial reduction of real dollars available for development.

We believe that we cannot afford to continue this cutback in efforts which have taken so long to bring about.

In response to this, the National Housing Conference, at its 52nd annual convention in March, adopted a number of specific recommendations which we urge the subcommittee to use as a guide in reaching its decisions on HUD's fiscal year 1984 appropriations.

I attached a copy of NHC's legislative policy statement for 1983, and of those specific recommendations, I briefly would like to hit a few of the highlights of a few of them. We support enactment and funding of a workable multifamily program to support a substantial level of production of housing for the low- and moderate-income families.

We call for adequate funding to support the public housing program, including new development as well as modernization and operating assistance.

We recommend the 235 home ownership program, which is a valuable tool in many areas of the country to obtain additional funding.

I think I can speak for your own State, Senator, South Dakota; 235 is very, very workable in South Dakota, and there is a great need for continued 235 funds in order to permit some of the moderate-income people in your State, as well as many other States around the country, to obtain a home of their own.

We support funding for all remaining projects in the HUD pipeline. We support funding for the community development block grant at a level sufficient to offset the inflation of recent years, and not only inflation, but also the larger number of communities which are not eligible as entitlement communities as a result of the 1980 census.

I would like to turn to another matter which I believe is of the highest importance if the programs of HUD at any funding level are to be able to continue to be managed effectively.

In the last 2 years, there has been a disturbing reduction in the number of HUD personnel.

Senator ABDNOR. Of what?

Mr. COAN. In the reduction of HUD personnel. Earlier this year we saw a reduction in force in the main office. There is now pending a RIF of greater proportion in the field office and a far greater RIF in the central office.

Any RIF is disruptive, and those carried out and proposed by HUD have been highly disruptive and aroused extremely low morale, and many capable persons with long experience have sought or are seeking to leave at the first opportunity.

We are very concerned that unless the subcommittee steps in and provides for an adequate level of personnel and direct that those funds be used for that purpose, HUD's ability to carry out its responsibilities will continue to deteriorate seriously.

There are two other items I would like to touch upon that are not in the statement. We urge that the subcommittee support and call upon the administration, call upon HUD to provide adequate funds for amendments for State-assisted 236 and rent supplement projects, something that the subcommittee called very strongly upon HUD to do last December and has been ignored so far.

I would like to follow up on what Mel Adams just said. I am chairman of the Housing and Redevelopment Authority of Fairfax County, a community of 600,000-plus people. We have over 2,000 people on our waiting list of our housing authority. We suspended it at one time, and there was such an uproar, even though we suspended it because we knew it would be 3 or 4 years before we could hope to provide housing to those people; it is well over 2,000 now.

Even in what is a very wealthy county, there are still a goodly number of lower income people who cannot afford housing who need some type of assistance to achieve a decent home in a suitable neighborhood, in an environment.

Thank you, Senator.

Senator ABDNOR. Thank you, Mr. Coan.

We appreciate your coming in and pinch hitting for Mr. Hyde. I am sure he is content to have you do that, because you are very knowledgeable.

Let me ask you: Given kind of the limited Federal funding resources we have, we have to fight for every buck around here now, why is it the conference supports increasing the number of families in the 50 to 80 percent of the median income in assisted housing rather than targeting the units more toward lower income families?

Mr. COAN. I guess it is an issue as to where you start. You start at the bottom and you first serve the family with zero income; then the family who makes $1,000 a year, and then $1,500, or you try to serve the totality of the people who cannot afford a home on their own.

The people at or below that 50 to 80 percent of the median income cannot find decent housing in the private marketplace without some type of assistance or spending a vastly disproportionate amount of their income for housing.

Our experience has been, as I think many others will testify, that you better serve the total needs of society. If you try to achieve some—what is the term I am trying to think of—some spread of persons, all of whom need assistance, living in that housing, you avoid some of the real serious social problems of overly concentrating the very poor in one place.

We all know it has happened to us in Southside Chicago and other places where there have been disproportionate concentrations of the very poor in one place.

It helps to maintain stability of projects; to have a broader income spectrum, all of whom, now, remember, are still in need of assistance. They cannot go out into that marketplace and find a house or a place to rent on their own without spending a disproportionate share of their income.

I guess that is basically the premise upon which the National Housing Conference, the National Association of Home Builders, a good machine, and I am sure NAHRO and others, have called for, going back to allowing all eligible persons to come in. It spreads the dollars further, too.

A person who is at 70 percent of the median income doesn't need as much as the person who is at 30, if we are talking about dollars. But I think we get better projects and better communities that way.

Senator ABDNOR. Thank you, Mr. Coan. I am sure Mr. Hyde would be very pleased with your testimony, and we do have our problems ahead of us in getting some kind of a budget together.

Mr. Coan. We appreciate the subcommittee's efforts which have provided a reasonable degree of funds. I would certainly urge you to go higher, but, certainly, if you had gone along with some of the budget recommendations, we would be in a lot worse shape than we are now.

I don't want to leave the impression that we are dissatisfied with the subcommittee's work; we just urge you to do more.

I guess that is it.

Senator Abdnor. Thank you. I am sure the chairman will appreciate that, recognizing the problems that he faces. We thank you.

Mr. Coan. Thank you, Senator.

[The statement follows:]

STATEMENT OF FLOYD H. HYDE, PRESIDENT, NATIONAL HOUSING CONFERENCE, INC.

MR. CHAIRMAN. My name is Floyd H. Hyde. I have appeared before this Subcommittee previously as Mayor of Fresno, California, and Vice President of the National League of Cities, and later as Assistant Secretary and Under Secretary of HUD. Today, I am appearing as President of the National Housing Conference and on its behalf I thank you for the opportunity to testify.

For over fifty years, the National Housing Conference has recommended and supported policies to encourage an adequate Federal response to the many housing and community development problems that have faced us over the years. The nation should be proud of the progress made, but we have not reached a point where we can coast on past efforts.

The current Administration has submitted its third annual budget and, like the previous ones, it reveals a lack of realism about the housing and community development needs of the country. These needs will not go away even with a strong economy.

Over the last two years, we have seen the elimination of the major rental assistance production program for lower income families -- the section 8 program; the suspension of public housing production; a substantial cut in housing for the elderly and handicapped; the apparent end of the GNMA tandem program; a reduced section 8 existing and moderate rehabilitation program; and a substantial decrease in the real dollars available for community development.

As severe as these cuts are, had the Administration's budgets for the past two years prevailed, the situation would have been far worse. The budget and authorization processes have been partially completed and I hope that the levels agreed on in those processes will be the minimum for appropriations purposes.

The efforts of the Administration and the Congress to deal with budget deficits have hurt housing programs more than most other programs. Budget accounting principles currently in vogue have had a devastating effect on housing programs because of the use of long-term commitments in those programs. I hope the Subcommittee will examine the unfairness of how costs are compared from program to program.

The National Housing Conference, in response to this serious situation, at its 52nd Annual Convention in March adopted a number of specific recommendations which we urge the Subcommittee to use as a guide in reaching its decisions on HUD's FY 1984 appropriations. I have attached a copy of NHC's Legislative Policy Statement for 1983 and of those specific recommendations. Briefly, these recommendations include:

(1) Enactment and funding of a workable multifamily program to support a substantial level of production for the low and moderate income;

(2) Adequate funding to support the public housing program, including new development. With respect to operating subsidies, we oppose the Administration's proposal for a fair-market-rent based system for allocating assistance. NHC supports the restoration of the original Comprehensive Improvement Assistance Program for public housing, which included special purpose and on-going modernization to avoid deferred maintenance and deterioration.

(3) We recommend adequate funding for the current section 8 existing and moderate rehabilitation programs at realistic fair-market-rent levels.

(4) The 235 homeownership program for lower income families is a valuable tool in many areas of the country and we recommend additional funding for it.

(5) We support funding for all remaining projects in the HUD pipeline.

(6) We support funding for foreclosure relief for the unemployed.

(7) We support funding for the Community Development Block Grant Program at a level sufficient to offset the inflation of recent years.

These are the minimum needs which must be funded if we are to continue, as a nation, to recognize a responsibility under the Constitution to provide for the general welfare. Decent, affordable housing and suitable neighborhoods for all our citizens have for the past fifty years been recognized as a major part of that Constitutional responsibility. We urge the Subcommittee to continue to recognize this responsibility in making its decision on HUD funds for Fiscal Year 1984.

I should like now briefly to turn to another matter which I believe is of the highest importance if the programs of HUD, at any funding level, are to be able to continue to be managed effectively. In the last two years, there has been a disturbing reduction in the number of HUD personnel. Earlier this year, we saw a RIF in the Central Office. There is now pending a RIF of far greater proportions in the field offices and a possible further RIF in the Central Office.

Any RIF is disruptive and those carried out and proposed by HUD have been highly disruptive. Morale is at an extremely low ebb and many capable persons with long experience have left or are seeking to leave at the first opportunity. We are very concerned that, unless the Subcommittee steps in and provides funds for an adequate level of personnel and directs that those funds be used for that purpose, HUD's ability to carry out its responsibilities will continue to deteriorate seriously.

I thank you for the opportunity to present the views of the National Housing Conference. I will be pleased to answer any questions.

NATIONAL HOUSING CONFERENCE
LEGISLATIVE POLICY STATEMENT FOR 1983

Overview

In recent years the Federal Government has departed from its historic role and responsibility under the Constitution to provide for the general welfare, by systematically dismantling the housing and community development programs of the nation. The needs which these programs were designed to meet, and the problems that the failure to meet these needs spawns, affect all our citizens and the economic wellbeing of, and the quality of life in, our society. It is essential that, in ordering the nation's priorities and allocating its resoruces, meeting these needs be high on that society's and its government's agenda.

In continued recognition of the basic goals for which it was founded in 1931, the National Housing Conference remains dedicated to the proposition that meeting the country's housing and community development needs should be a paramount concern of all citizens and their national government. NHC calls upon the Congress and the Administration to act affirmatively to restore the strong Federal role in housing and community development that has been developed over the past 50 years and to adopt in 1983 such further meaningful solutions as may be needed.

If it had not been for strong resistance during the past two years from NHC and many other concerned elements of our society and from some members of the Congress, most of the Federal housing and community development programs that had been so ardously crafted over the past 50 years would have been terminated and relegated to the trash can. At the same time, the nation's economy has experienced its worse conditions since the Depression of the Thirties, the deficit has soared and, along with it, military spending is planned to absorb an evergrowing share of reduced Federal revenues.

During this period, our nation's housing industry has experienced a severe depression and housing starts decreased to unprecedented lows. Construction unemployment was at 20 percent early this year -- twice that for the workforce as a whole. With interest rates at astronomical levels, only a small fraction of potential new home buyers could afford to buy a home and the construction of needed new rental housing came almost to a complete halt.

Recent signs of economic recovery are fragile at best, and the full effort of national policy is needed to make recovery a reality. History has shown housing to be the strongest ingredient in an economic recovery. However, unless mortgage interest rates drop significantly below their present 12 to 14 percent range, housing starts for 1983 are only projected at a modest 1.3 to 1.5 million units. This interest rate level would leave many millions of families unable to afford to buy or to rent housing that meets their needs. Certainly, this is not the time to consider a reduced level of Federal involvement in housing.

Even with a modest recovery in the overall housing scene, the housing needs of the nation's low and moderate income will continue to increase under present circumstances. Instead of the Federal Government moving to cushion the impact of the severe recession on these least-fortunate of its citizens, the Administration has proposed to terminate almost entirely the 45-year Federal commitment to meeting their housing needs. Programs have been declared unneeded, unworkable or too costly, without more workable or less costly, but still workable, programs being proposed as alternatives.

It is essential that present Federal low and moderate income housing programs be maintained until such time as workable alternatives are in place. These present programs, or their replacements, must be funded at levels adequate to permit a continuation in the significant progress of recent years in reducing the still very large number of American families and elderly living in inadequate or over-crowded housing or paying extraordinarily high proportions of their income for shelter. These programs must also be administered with a feel for the dignity and human worth of those receiving assistance and the many other calls on their limited financial resources for meeting the basic necessities of life.

With the recession and sharply reduced federal financial assistance, local governemnts, both urban and rural, find themselves more and more unable to cope with maintaining an aging infrastructure, let alone deal with the need to upgrade low and moderate income neighborhoods and provide those public facilities so often needed to attract economic activity. While Community Development Block Grants and UDAG have been maintained, their funding has remained static and not kept up with inflation. The value of the aid provided by the CDBG program would be further reduced by proposals to abolish and roll into it complementary programs, such as the 312 Rehabilitation Loan program, and to merge it with General Revenue Sharing. In rural areas, the Rural Development Programs of FmHA are proposed for almost complete extinction.

At the same time that housing and community development programs (along with many other social programs) are being abolished or sharply cutback military spending has been, and is slated to continue to be, sharply increased far above the inflation rate and Federal tax receipts have been reduced. This has caused not only a severe dislocation in the economy, but also ignores a prime responsibility of government -- the general welfare of all the people. The National Housing Conference calls upon the Congress and the Administration to reverse this abdication of responsibility to the American people and to once again place meeting the housing and community development needs of the nation high on the national priority list.

NATIONAL HOUSING CONFERENCE
LEGISLATIVE AND REGULATORY PROGRAM FOR 1983

NHC has identified the following areas that are essential ingredients of housing and community development legislation in 1983:

For Housing --

1. Pipeline Projects. Support both administrative and legislative actions that will bring into development both active and inactive HUD, State Agency and FmHA pipeline projects for new construction and substantial rehabilitation that have received program reservations.
2. Multifamily Production Program. Support the early enactment by the Congress of a workable multifamily program to support a substantial level of production of housing for low- and moderate-income families, as well as for the elderly and handicapped.
3. Tax-Exempt Housing Bonds. Support the continued use of tax-exempt bond financing for the development of single, multifamily and cooperative housing for the low and moderate income.
4. Credit Regulation. Support the restoration of the Credit Control Act of 1969, to permit use of selective credit regulation in order to bring about more affordable interest rates.
5. Public Housing. Support adequate funding for the public housing program, including operating subsidies, on-going modernization and new development activities.
6. Operating Subsidies. Support an improved public housing performance funding system for computing public housing operating subsidies and oppose the Administration's proposal to establish an FMR-based system for allocating operating assistance.
7. Public Housing Modernization. Support the public housing CIAP as it was originally intended, which included special purpose and on-going modernization to avoid deferred maintenance and deterioration of the housing units. Restore the FHA Minimum Property Standards (MPS) as the acceptable level for improvement.
8. Income Eligibility & Rent/Income Ratio for Assisted Housing. Restore to 25 percent the rent/income ratio for the low-income housing programs that recognize the unique problems of lower income families. Also support legislation to eliminate the limitation on the percentage of families with incomes between 50 percent and 80 percent of the median income that can be admitted to HUD-assisted housing.
9. Deduction from Gross Income for Assisted Housing. Support the restoration of "going to work costs" as an eligible deduction from gross income in determining tenant eligibility and rent payments for the public housing and Section 8 programs.

10. Foreclosure Relief. Support efforts through adequate temporary Federal advances to assist unemployed families who face mortgage foreclosures on their homes or evictions from their rented housing units.

11. Section 8 Existing Housing & Fair Market Rent Determinations. Support the continuation of the Section 8 Existing Housing Programs, and reject the Administration's proposal to substitute a reduced benefit Housing Payment Certificate program. Also support adequate appropriations for Existing Section 8 Certificates and Fair Market Rental levels for both new and existing Section 8 housing.

12. Housing Credit. Support the maintenance of existing Federal programs and activities that direct credit resources into the residential mortgage market, such as FHA mortgage insurance and GNMA mortgage-backed security programs without arbitrary caps on their use and, further, support the development of new mechanisms to assure that an adequate amount of mortgage funds, including the use of pension funds under adequate safeguards, are available to housing.

13. Rural Housing. Support the continuation of and full funding for the Farmers Home Administration's housing programs, including the 502 low and moderate income single family and 515 multifamily programs with rural rental assistance.

14. 235. Support the continuation and refunding of the HUD Section 235 program.

15. Cooperative Housing. Support legislative and regulatory changes for the production of cooperative blanket and share financing housing. Support affordable homeownership opportunities for tenants through cooperative conversions. Eliminate the housing cap on the National Consumer Cooperative Bank's portfolio.

16. Rehabilitation. Support the continuation of Section 312 and other existing programs and the enactment of new programs for the rehabilitation of the existing housing stock.

For Community Development --

1. Community Development Block Grants. Support the CDBG program at budget levels sufficient to offset inflation. We recommend that the current range of eligible activities be continued, and reject any merger of this program with General Revenue Sharing or a shift of its administration to the states. We also reject the inclusion of new housing construction as a CDBG eligible activity, unless adequate funding is made available for this purpose.

2. Economic Development & UDAG. Support a broad range of programs that provide jobs, infrastructure improvements, community revitalization and economic development for the nation's urban and rural communities. This includes specific support for current jobs legislation and full funding of the UDAG program.

3. UDAG Housing Projects. Support the restoration of housing as an acceptable development activity under the UDAG program.

4. Tax Incentives. Support continuation and expansion of tax incentives to further the objectives of the NHC legislative program and the encouragement of low and moderate income and/or community development programs.

ADDITIONAL PREPARED STATEMENT

[CLERK'S NOTE: Additional statements relating to the Department of Housing and Urban Development follow:]

STATEMENT OF ELLA MAE HORSE, NATIONAL CONGRESS OF AMERICAN INDIANS

Mr. Chairman and members of the Subcommittee. My name is Ella Mae Horse. I am an officer for the National Congress of American Indians (NCAI). We appreciate having the opportunity to present testimony here today.

We are here to request the Subcommittee's support for maintaining the current Indian Housing Program in fiscal year 1984 rather than the new program proposed by the Administration. We do not endorse or support the proposals to change the current program. These changes were developed by the Administration without consultation with the Tribes and were presented to the Tribes only after the Administration had already decided on what the changes would be. Our member Tribal Governments refuse to rubber-stamp the proposals.

Mr. Chairman, the current Indian Housing Program has been around for approximately 20 years. It took quite a few of those years for Tribal Governments to learn the program well enough to administer it in their own communities. And it took the Federal Government just as long to understand why an urban program wouldn't work in Indian Country and to adapt the program to a reservation orientation. After 20 years and many homes later, the present Indian Housing Program has served the Tribes well and has provided many Indian and Alaska Native families with decent, safe and sanitary housing.

NCAI's basic concerns with the Administration's proposals are:

1. The lack of consultation with the Tribes during the development of the proposals. The Administration decided on the changes first and presented them to the Tribes for their review afterwards. We do not consider this consultation.
2. We oppose requiring Tribes to pledge income from their resources, assets or future grants. We maintain that pledging of Tribal funds should not be a requisite for receiving services under this program, especially since cities or public housing authorities are not bound to the same requirements. We opposed attachment of trust funds in the Indian Housing Act legislation and we take the identical position here with respect to Tribal funds.
3. As we had informed HUD, we are not in favor of replacing a 20-year old program which Tribes are experienced in, that they generally support and which has produced good housing with one that is untried and untested. Tribes are being told to start all over again with a new, unknown program

whose major components are basically geared not only to urban areas, but for use on non-trust land.

4. At this point, there is no guarantee that new construction will be added as an eligible activity under the CDBG program this year. This is a major component of the Administration's proposals as another method of financing housing construction by Tribes. Without the ability to use CDBG funds in this manner, Tribes stand to lose half of the 3,000 units that the Administration says will be provided under its proposals.

All in all, we fail to see how the Tribes will benefit from the adoption of these proposals.

We do want to make is clear that we recognize the efforts being made by the Housing Subcommittee to respond to the Tribes' concerns about the Administration's proposals. We favor the changes that the Subcommittee is proposing, particularly the revised definition of "Tribe", the new definition of "reservation," the removal of the restrictions on how the housing grant may be used, and "untying" the vouchers from the units. These changes, however, would be made only in the context of the Administration's proposals and would not restore the current program in the 1984 budget. Therefore, given our concerns and, more importantly, the overwhelming disapproval by the Tribes of the Administration's proposals, we cannot support the new program.

Nevertheless, if the Administration insists on implementing its proposals, we recommend that instead of supplanting the current program, the Indian Housing Grants Program be operating along with it on a 5-year demonstration basis. This would provide the opportunity to test the voucher and FHA-insured mortgage provisions in the communities of Tribes willing to participate, instead of imposing them on all Tribes. In addition, we would favor making new construction an eligible activity under the Indian CDBG program with a funding level of $151 million a year for 3 years instead of $50 million as proposed by the Subcommittee. We would favor this approach because the flexible nature of the program and the low level of red tape connected to it has made it very popular with the Tribes. We would also favor this approach with the current program maintained at the same time.

In closing, we again urge the Subcommittee to support the existing Indian Housing Program by maintaining it in the 1984 budget and funding it at a level of 4,000 units. In addition, we urge the Subcommittee to fund the Indian CDBG program at the level proposed by the Administration: $75 million, or at the FY'83 at least.

NATIONAL AMERICAN INDIAN HOUSING COUNCIL POSITION PAPER ON INDIAN HOUSING

Introduction

Since 1974 the National American Indian Housing Council (NAIHC), which represents all Indian and Alaskan Housing Authorities, has concerned itself with the housing needs, housing conditions, and housing programs of Indian and Alaskan communities.

NAIHC recognizes the need for new dwelling units, and the need to rehabilitate existing substandard dwelling units on Indian lands.

NAIHC recognizes that, because of the status of Indian tribes as federally regulated entities, the tribes do not fare well in competition with political components of states for funds, including the private sector. Thus, 80% to 90% of all new Indian housing has been provided by the Office of Indian Programs under the Department of Housing and Urban Development (DHUD).

In recent months, NAIHC has been greatly concerned and alarmed at the non-supportive role assumed by the main source of Indian housing, the Office of Indian Programs, DHUD, in Washington, and its action to eliminate Indian Housing by proposing a zero housing allocation for Indians.

No amendents have been approved to support deletion of Indian Housing under the amended Housing Act of 1937. Thus, Indians and Alaskans are entitled to equal housing rights under this law.

In 1982, as a gesture of compromise to the pressing housing need on Indian lands, HUD reluctantly allocated 1,200 new dwelling units. A communication gap has developed between the HUD Central Office and Indian communities, which naturally has cast extreme uncertainty on the future of Indian housing under DHUD. This uncertainty has caused concerned groups, including NAIHC, to seek alternative approaches to the delivery of housing to Indian and Alaskan communities.

The result was proposed legislation in the form of H.R. 5988 and S. 2847 which would realign Indian housing under the Department of Interior, specifically the Bureau of Indian Affairs.

In rebuttal, HUD, in late FY82, developed a totally infeasible housing Block Grant demonstration program to provide a partial housing delivery system for Indians.

At this time, the future of Indian Housing under HUD still remains uncertain.

Indian Housing Position

Having discussed concerns, understandings and the present status and attitude of the Department of Housing and Urban Development, the National American Indian Housing Council (NAIHC) hereby sets forth its position concerning the delivery of housing to Indian and Alaskan Communities.

NAIHC supports the immediate and continued need for an Indian Housing program for Indian and Alaskan Communities.

NAIHC recognizes problems associated with producing and financing Indian Housing under present Department of Housing and Urban Development (DHUD) regulations.

NAIHC has received and reviewed DHUD's proposal to provide Indian Housing under a modified Community Block Grant Program (CBGP) utilizing housing block grant, FHA mortgage insurance and certificates. NAIHC vigorously opposes this proposal because it is both undesirable and unacceptable to tribal officials and its implementation in Indian trust land communities is infeasible.

Instead of the proposed modified CBGP and, in desperation, NAIHC has requested DHUD to continue its current Indian Housing program with cost containment modifications. Despite logical rationale, DHUD has indicated that modification of its current Indian Housing program is unacceptable.

DHUD's obstinacy has forced NAIHC to endorse other alternatives for the delivery of Indian Housing.

In compliance with directives from the NAIHC membership, the Indian Housing Authorities, NAIHC hereby supports the tribal leadership in the design, formulation, adoption and implementation of H.R. 5988, S. 2847, and/or other housing legislation needed to meet the desperate housing needs of Indian and Alaskan communities.

This position was acted upon and adopted 5 members in favor and 3 members abstaining, at the National Amercian Indian Housing Council Quarterly Board meeting held December 8, 1982 in Washington, D.C.

CERTIFICATION

It is hereby certified by the undersigned that the foregoing Position Paper was adopted by the Board of Directors of the National American Indian Housing Council in a duly constituted meeting on the 8th day of December, 1982 at which meeting there was a quorum present and a majority of the Board members voting.

Johnny Chopper
CHAIRMAN

ATTEST:

SECRETARY

FLANDREAU SANTEE SIOUX TRIBE—RESOLUTION NO. 83-09

WHEREAS, the Flandreau Santee Sioux Tribe is a federally recognized organization with a constitution and By-laws approved by the Secretary of the Interior and Commissioner of Indian Affairs on April 24, 1936, amended February 7, 1941 and revised November 15, 1967, and

WHEREAS, Article VIII of the Flandreau Santee Sioux Tribal Constitution authorizes the Executive Committee to adopt resolutions consistent with the tribe's constitution for the welfare of the tribe and

WHEREAS, The Flandreau Santee Sioux Tribe recognizes the continuing need for safe, sanitary housing for Indian people across the country.

NOW THEREFORE BE IT RESOLVED, that the Flandreau Santee Sioux Tribe supports the attached position paper on Indian housing which was endorsed by the National American Indian Housing Council and the National Congress of American Indians.

CERTIFICATION

The foregoing resolution was duly enacted and adopted on this 11th day of February, 1983, by the Flandreau Santee Sioux Tribal Council at which a quorum was present by a vote of 2 for, 0 against and 1 not voting.

George T Allen
George L. Allen, Sr.
Tribal Chairman
Flandreau Santee Sioux Tribe

Thomas R. Allen
Thomas R. Allen
Secretary/Treasurer
Flandreau Santee Sioux Tribe

STATEMENT OF GALE CINCOTTA, CHAIRPERSON, NATIONAL PEOPLE'S ACTION

America's worst economic crisis since the depression has had a devastating effect on low and moderate income communities. Residents of these disinvested neighborhoods are suffering now more than ever before from inadequate unaffordable housing, severely deteriorating conditions and disastrously high levels of home foreclosures.

National People's Action urges you and your subcommittee members to respond to this massive crisis by supporting the enclosed demands for increased funding and stronger low income targeting regulations in federal programs concerning housing, community development and foreclosure prevention.

National People's Action is a coalition of over 300 low and moderate income community-based organizations which have closely monitored U.S. Department of Housing and Urban Development (HUD) programs because of the critical importance of these programs in improving our neighborhoods.

Over the past several years, community leaders from National People's Action have testified at numerous Congressional committee and subcommittee hearings showing the need for increased funding of housing, community development and foreclosure prevention programs. The need to increase HUD funds this year is more drastic than ever before due to the massive funding cutbacks in HUD programs in recent years under the Reagan Administration. These harmful cutbacks have crippled neighborhood revitalization efforts throughout the country.

The Reagan Administration and Congress have made one of the most damaging mistakes in our country's history by enacting legislation which resulted in massive funding increases in the military budget and deep cutbacks in housing, community development and foreclosure prevention programs.

In fiscal 1983, the Reagan Administration and Congress appropriated a staggering $232 billion for the Department of Defense. In contrast, only $13.1 billion was appropriated for the Department of Housing and Urban Development, after accounting for a cutback in HUD appropriations due to a $2.8 billion rescission in the assisted housing rent supplement programs. From 1978 to 1983, Department of Defense appropriations increased by 107%, while Department of Housing and Urban Development appropriations decreased by 65%.

And worse yet, President Reagan has proposed spending at least $1.5 trillion for the weapons build-up and military budget over the next five years, while proposing even further and deeper cutbacks in housing and community development programs.

More and more of our hard-earned tax dollars are being spent on wasteful, unproductive and overfunded military programs. Consequently, less and less federal funds are being spent on desperately needed and underfunded housing, community development and foreclosure prevention programs.

This massive shift of our nation's financial and human resources into the military will result in continued economic decline and the failure to meet the basic needs of the American people.

We urge your subcommittee and committee to take immediate action to strengthen our nation by reversing the destructive spending priorities which have wasted billions of dollars on military programs at the expense of our communities. We demand that the Reagan Administration and Congress enact legislation that appropriates funds for the improvement of our lives, and not for the endangerment of our lives.

National People's Action strongly supports the $1 billion increase in Community Development Block Grant (CDBG) funds which was included in the $4.6 billion Emergency Jobs Legislation (Public Law 98-8) enacted on March 24, 1983. However, this funding increase alone is not sufficient to meet our nation's enormous community development needs.

National People's Action urges your subcommittee to unanimously support the enclosed demands which would adequately address the pressing needs of low and moderate income communities. We urge your subcommittee and committee to restore the national commitment to affordable housing and decent conditions in low and moderate income neighborhoods.

Our demands deserve your most serious consideration in pending legislation before your subcommittee and committee: "HUD-Independent Agencies Appropriations Bill for Fiscal 1984," as well as the other related pending bill before the Senate: S.1338, "Housing and Community Development Act of 1983."

NPA Budget Demands for HUD Programs in Fiscal 1984

	FY 1984 NPA DEMANDS	FY 1981 Before Reagan Administration took office	FY 1983 Current Appropriation	FY 1984 Reagan Administration Proposal
Section 8	$25.000 Bil	$19.357 Bil	$4.490 Bil	$ 515 Mil (for Sec. 8 & Pub. Hsng.)
Public Housing	$10.000 Bil	$ 8.402 Bil	$5.512 Bil	
CDBG	$ 5.000 Bil	$ 3.694 Bil	$4.456 Bil (includes new increase of $1.000 Bil)	$3.500 Bil
UDAG	$ 675 Mil	$ 675 Mil	$ 440 Mil	$ 196 Mil
Section 312	$ 130 Mil	$ 130 Mil	$ 68 Mil (revolving loans)	$ 0
Section 235	$ 2.100 Bil	$ 2.100 Bil	$ 0	$ 0
Neighborhood Self Help Grants	$ 15 Mil	$ 15 Mil	$ 0	$ 0
Assistance to Prevent Mortgage Foreclosures	$ 1.110 Bil (Conventional, VA, FHA Mortgage Insurance Fund)	$ 141 Mil (FHA Mortgage Insurance Fund)	$ 81 Mil (FHA Mortgage Insurance Fund)	$ 12 Mil (FHA Mortgage Insurance Fund)

SECTION 8 HOUSING ASSISTANCE SUBSIDIES

Budget Demand: $25 billion in fiscal 1984 funds and all unspent Section 8 money from previous years' budgets

Budget Justification:

Devastating funding cutbacks in federal housing programs, massive unemployment and unaffordable private sector housing have currently led to the worst low income housing crisis in America since the depression. There are now more than 25 million lower income American households who urgently need financial assistance in order to live in decent affordable housing.

There are an estimated 7.5 million substandard older housing units in the United States which are in need of immediate rehabilitation. The failure to provide adequate funding to repair and save these older units would result in further decreasing the already inadequate supply of low cost housing.

Despite the severe housing shortage for low income people, there are 70,000 Section 8 units in the pipeline which were funded in previous years' budgets but have not been completed due to numerous delays. It is therefore necessary for HUD and the cities to speed up the completion of delayed Section 8 projects by spending these unutilized funds.

Legislation and Regulation Demands:

1. Reject the Reagan Administration's harmful "voucher" plan which would eliminate Section 8 assistance for new and rehabilitated low income housing. The voucher system would end the federal government's longstanding commitment to provide decent housing for lower income people. Cities that used the direct-subsidy voucher system did not significantly add to their supply of low income housing and therefore failed to meet their increasing low income housing needs.
2. Reject the Reagan Administration's proposed regulations which would prohibit the allocation of Section 8 assistance to persons earning 50% to 80% of the area median income. In many cities, persons earning only 50% to 80% of the area median income need federal housing assistance because they cannot afford the high costs of the private housing market.
3. Require HUD to monitor Section 8-assisted new and rehab projects in order to prevent the abuses of inflated project costs and shoddy construction. These developer abuses have reduced the number of lower income people benefitting from Section 8 assistance. In addition, the Reagan Administration and several members of Congress have cited these abuses in lobbying for the termination of Section 8. However, increased HUD monitoring of Section 8 projects would eliminate these abuses. Section 8 could then serve as the cornerstone of the federal government's expanded commitment to provide adequate housing for all lower income Americans.

PUBLIC HOUSING

Budget Demand: $10 billion in fiscal 1984 and all unspent Public Housing money from previous years' budgets

Budget Justification:

Although there are more than 25 million lower income American households in need of housing assistance, there are only 1.1 million public housing units in the United States.

The lack of public housing and the need to increase funding for new public housing units can be clearly seen in its multi-year waiting lists. In most cities, low income people who apply for public housing usually have to wait several years before they are finally placed in public housing. .

HUD and the city housing authorities have failed to maintain public housing units and as a result, most of the nation's 1.1 million public housing units are badly deteriorated.

Public housing modernization funds and operating subsidies must be increased to meet this substantial need for improving and maintaining the public housing projects.

Legislation and Regulation Demands:

1. Require that subsidized rents be rolled back to 25% from the current 30%. Subsidized rents were increased from 25% to 30% of a tenants income in 1981 legislation supported by the Reagan Administration. This 20% rent increase over the next five years would raise rents by $1.7 billion for the 3.4 million low income households in federally subsidized housing. This enormous rent increase is unaffordable to poor people and senior citizens on fixed incomes.

2. Require that food stamps must not be counted as income for calculating tenant rents in public housing.

3. Require that the public housing tenant grievance procedure be maintained.

4. Require that public housing tenants must not be evicted without just cause, and that the 14 day prior notice for eviction must be kept.

5. Require that public housing tenants be provided 30 days to comment on any federal regulation changes in public housing.

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) PROGRAM

Budget Demand: $5 billion in fiscal 1984

Budget Justification:

The federal emergency jobs assistance legislation enacted on March 24, 1983 included a $1 billion increase in CDBG funds which raised the 1983 CDBG budget to $4.456 billion. Congress provided a $1 billion increase in CDBG funds to create job opportunities and stimulate public and private investment in lower income communities which are suffering from skyrocketing unemployment and severe disinvestment.

Increasing the CDBG budget to $5 billion would more adequately meet the massive need for employment, housing rehabilitation and community development improvements in deteriorating neighborhoods.

Reauthorization Legislation and Regulation Demands:

1. Reject the Reagan Administration's disastrous "New Federalism" plan which would shift low-income-targeted CDBG funds to the non-targeted General Revenue Sharing (GRS) Program by 20% each year from 1984 - 1988. This harmful plan would take away desperately needed funds from lower income people and as a result, many hard-pressed neighborhoods would be denied their only opportunity for revitalization.

2. Require that the primary objective of the CDBG program is to principally benefit low and moderate income people.

3. Require a clear definition of low and moderate income for the CDBG program benefit test:
   -- Low income persons have incomes which are less than 50% of the area median income.
   -- Moderate income persons have incomes which are between 50% and 80% of the area median income.

4. Require that 75% of all CDBG funds principally benefit low and moderate income people.

5. Require that HUD monitor the CDBG program to insure that 75% of all CDBG funds principally benefit low and moderate income people.

6. Require that there is full citizen and community group participation in the planning, implementation and monitoring of all CDBG-funded activities and programs. This includes complete citizen and community group access to all CDBG program records and information, along with a timely and responsive CDBG citizen complaint process.

7. Require that a majority of the jobs created by CDBG-funded activities be provided to low and moderate income people.

8. Require that a majority of the housing units rehabilitated or constructed with CDBG funds be affordable to and occupied by low and moderate income people. Affordability is defined as rents which are no more than 25% of a tenant's income.

9. Require that cities each year meet at least 15% of their lower income housing assistance needs as reported in the Housing Assistance Plan (HAP).

10. Prohibit cities from displacing low and moderate income people with CDBG-funded projects.

11. Require that cities' CDBG applications include a strategy and action plan for preventing displacement of low and moderate income people.

12. Prohibit cities from charging low and moderate income people with special assessments for CDBG-funded improvements.

13. Require HUD to insure that projects receiving Section 108 loan guarantees: a) principally benefit low and moderate income people and b) are economically feasible.

14. Require cities to prove that an "urgent need" activity occurred no longer than 18 months before CDBG funding was requested to meet the urgent need.

15. Require cities to spend all of their annual CDBG funding within 12 months of receiving their annual CDBG funding from HUD.

16. Require that areas must be designated as slum and blight by state or local law in order to be eligible for CDBG-funded activities which aid in the elimination of slum and blight.

17. Require that, in order to be eligible for CDBG funds, activities designed to attract or retain neighborhood commercial facilities must be located in low and moderate income neighborhoods and must be designed for use by low and moderate income neighborhood residents.

URBAN DEVELOPMENT ACTION GRANT (UDAG) PROGRAM

Budget Demand: $675 million in fiscal 1984

Budget Justification:

It is necessary to restore the 1981 UDAG funding level of $675 million in order to increase UDAG funds for desperately needed neighborhood revitalization activities. These projects would leverage private financing and create jobs in communities which are currently plagued by high unemployment and lack of investment.

Legislation and Regulation Demands:

1. Require HUD to insure that a majority of the UDAG projects must benefit low and moderate-income people. Since this program began in 1978, most UDAG money has been spent on downtown hotels and redevelopment projects which: a) would have been built without federal subsidies and b) benefitted higher income people at the expense of lower income neighborhoods. Correcting these past abuses will enable the UDAG program to achieve its main objective of stimulating private sector investment in financially distressed communities.

2. Require that HUD restore the original balance between housing, commercial and industrial projects which the Reagan Administration took away. UDAG funds can be effectively utilized to lower interest rates on rehab and mortgage loans to provide affordable housing for lower income people.

3. Require that funds recaptured in the payback of UDAG loans be spent on CDBG eligible activities for the benefit of low and moderate income neighborhood residents.

SECTION 312 LOW INTEREST REHABILITATION LOAN PROGRAM

Budget Demand: $130 million in fiscal 1984

Budget Justification:

Since its inception in 1964, the Section 312 loan program has provided affordable housing rehab loans to help preserve many older homes in neighborhoods throughout the country. The importance of this lower interest rate rehab program to low and moderate income people has increased significantly during the current period of higher interest rates.

Older neighborhoods have been hurt by the funding cutbacks in Section 312 loans which have occurred since the Reagan Administration took office in 1981. It is necessary to restore the 1981 Section 312 funding level of $130 million in order to strengthen our nation's commitment to preserve housing in older neighborhoods.

Legislation and Regulation Demand:

1. Require that cities target Section 312 loans to low and moderate people. Too many Section 312 loans have been provided to higher income people at the expense of lower income people who have a greater need for these low cost rehab loans.

SECTION 235 LOWER INTEREST RATE MORTGAGE ASSISTANCE PROGRAM

Budget Demand: $2.1 billion in fiscal 1984

Budget Justification:

The Section 235 program has provided lower income households with one of their only opportunities to realize the American dream of homeownership. Despite the major need for this program in the current period of higher interest rates, there have been massive cutbacks in Section 235. These cutbacks have denied most lower income families of their chance for homeownership. Moreover, the cutbacks in Section 235 -- which was formerly one of HUD's largest programs -- has hurt the financially-troubled U.S. housing industry.

It is necessary to restore the Section 235 program to the 1981 funding level of $2.1 billion in order to: a) help lower income families once again realize their American dream of homeownership and b) help stimulate the lagging U.S. housing industry which would contribute to increased employment and a stronger U.S. economy.

Legislation and Regulation Demand:

1. Require HUD to allocate Section 235 mortgage assistance more equally between new and existing homes. New homes located primarily in the suburbs have received a much larger share of Section 235 assistance than have existing homes located primarily in city neighborhoods. It is necessary for HUD to substantially increase Section 235 mortgage assistance to existing homes in city neighborhoods because these areas have been redlined by conventional lenders and therefore have a greater need for assistance.

NEIGHBORHOOD SELF-HELP DEVELOPMENT PROGRAM

Budget Demand: $15 million in fiscal 1984

Budget Justification:

It is vitally important to restore this pioneering, neighborhood capacity-building program which achieved outstanding success from its inception in 1978 to 1981 when it was cancelled by the Reagan Administration.

This program featured one of the highest leveraging ratios of any HUD program. Every $1 in grants to neighborhood groups leveraged $14 in public and private investment in the neighborhoods.

The Self-Help Program helped to develop strong and well-balanced partnerships between community groups, local government and the private sector. These partnerships developed neighborhood revitalization projects which improved housing, created jobs and increased the local tax base. It is necessary to reauthorize this self-help program and build upon its proven success in revitalizing neighborhoods.

Legislation and Regulation Demand:

1. Require that Neighborhood Self-Help Development grants be provided to low and moderate income neighborhood groups.

ASSISTANCE TO PREVENT MORTGAGE FORECLOSURES

Budget Demand: $1.110 billion in fiscal 1984

Budget Breakdown:

-- $760 million would be provided to an estimated 76,000 homeowners facing foreclosure on conventional mortgage loans and mortgage loans insured by the Veterans Administration (VA).

-- $350 million would be provided from the Federal Housing Administration (FHA) Mortgage Insurance Fund to an estimated 10,000 homeowners who face foreclosure on FHA-insured mortgage loans, and are accepted into HUD's Mortgage Assignment Program (MAP).

Budget Justification:

Fueled by massive unemployment, our nation is suffering from the worst housing foreclosure crisis since the depression. There were an estimated 187,000 homes lost to foreclosure in 1982. The American dream of homeownership has become the American nightmare of foreclosures.

The only federal program which provides financial assistance to help borrowers avoid foreclosure is HUD's Mortgage Assignment Program (MAP). MAP is funded by the FHA Mortgage Insurance Fund which is not part of the federal budget. MAP is limited to homeowners who have defaulted on FHA-insured mortgage loans.

However, MAP has failed to help most financially-troubled FHA borrowers avoid foreclosure. In fact, during the past two years, HUD has accepted and provided mortgage relief to only 15% of all the troubled FHA borrowers who applied for MAP assistance.

The Reagan Administration has proposed allocating only $12 million to MAP in fiscal 1984. This would be a drastic 91% cutback from the $141 million provided to MAP in 1981 before the Reagan Administration took office.

Reagan's drastic cutbacks in MAP were an attempt to phase out MAP and replace it with the cheaper Temporary Mortgage Assistance Payments (TMAP) Program. Under TMAP, fewer defaulted FHA borrowers would receive less assistance and be burdened with more difficult payback terms such as higher interest rates and less time to pay back the loan.

However, Reagan has failed to phase out MAP. In a suit against HUD filed by the Legal Assistance Foundation, Judge Hubert L. Will ruled on April 6, 1983 that HUD could not implement TMAP. Judge Will accused HUD of "a disgraceful history of foot dragging" aimed at "scuttling" federal relief for poor homeowners in default.

Judge Will's ruling insures that MAP will continue. It is therefore necessary that MAP funds be increased to $350 million to provide adequate mortgage relief to an estimated 10,000 FHA borrowers in default in fiscal year 1984. It is important to note that MAP funds do not cost the American taxpayer anything because these funds come from the FHA Mortgage Insurance Fund which is paid for by FHA borrowers. As a result, the Mortgage Insurance Fund is not part of the federal budget.

Legislation and Regulation Demands:

1. Authorize a 36 month mortgage foreclosure assistance program to help all homeowners in default avoid foreclosure.

2. Require that senior citizens be prevented from being foreclosed on and evicted from their homes.

CONCLUSION OF HEARINGS

Senator ABDNOR. This will conclude our 2 days of public witness hearings. The subcommittee will recess and reconvene at the call of the Chair.

[Whereupon, at 3:50 p.m. Tuesday, May 24, the hearings were concluded and the subcommittee was recessed to reconvene at the call of the Chair.]

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